THE NATURE AND EXTENT OF COLLEGE AND CAREER READINESS PARTNERSHIPS IN SCHOOL DISTRICTS SERVING STUDENTS IN RUST BELT AREAS

A DISSERTATION

SUBMITTED TO THE GRADUATE SCHOOL

IN PARTIAL FULLFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF

DOCTORATE OF PHILOSOPHY

IN EDUCATIONAL STUDIES

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BALL STATE UNIVERSITY

MUNCIE, INDIANA

MAY 2020

ACKNOWLEDGEMENTS

I would like to thank my committee chair, Dr. Jayne Beilke for the support and her unwavering belief in me. I first met Dr. Beilke as an undergraduate in 1995. She proved then and throughout my graduate studies that she has an unmatched ability to take young adults that have not been exposed to the real world and cynical adults that have been exposed and engage all in discussions over hard societal topics. What I learned in her course in 1995 changed me as a person and helped form me as a teacher. Dr. Beilke was then and continues to, by action not words, understand the needs and fears of students like me - first-generation college students. Her support and mentoring of me throughout my educational journey have been life-changing in many ways.

I would also like to thank the rest of my committee: Dr. Serena Salloum, Dr. Jill Bradley-Levine, and Dr. Richard Seymour. Each one of them, in their own way, has supported and mentored me. I am grateful for their inclusion of me in scholarly work and discussion, their humor, their friendship, guidance, and their advisement.

I would be remiss if I did not acknowledge Dr. Gilbert Park and the hourly/ salaried employees that I have encountered throughout my time here at Ball State. Dr. Gilbert Park has been constant support to me and always had a minute to talk even when he didn't. As I leave Ball State, I consider Dr. Park my friend. It is hard to imagine now that my biggest life lesson learned at a university would occur in 1993 in Ball State University's financial aid office when a woman taught me a lesson about fear and attitude. Ball State and I suspect most other universities are made up by a group of hourly employees and support people that have profound impacts on students - from the food court to the computer labs and libraries to the employees mowing the lawns – each one I have ever encountered taught me something about the world and about what makes an organization successful and for that I am forever grateful.

Many things occurred as I sought and finished coursework for two separate doctorate degrees and a masters degree. Those things have become part of my story that I will take with me. The story begins with a university that knew how to help a first-generation student from a dysfunctional union proud home and mold that student into an award-winning teacher. Where it ends is much different and it is a life story that will be told everywhere my life takes me.

My very first education course at Ball State University was taught by an instructor who was a career high school teacher. She spent a considerable amount of time explaining to us the structure and hierarchy of schools and districts (applicable information for new educator prep students). She discussed the interactions that we as teachers would have with parents, community members, administrators, and our coworkers. I still have the notes I took in her course, what I learned from her really helped me as a teacher and was paramount in understanding my first encounter with a superintendent and board president as a new teacher. During her lectures on school hierarchy and professional interactions she stated numerous times and it is written at the top of two separate pages of notes … “If it doesn’t involve a student, do not involve a student.” … and in the end, that is where my story will begin.

ABSTRACT

DISSERTATION: The Nature and Extent of College and Career Readiness Partnerships in School Districts Serving Students in Rust Belt Areas

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DEGREE: Doctor of Philosophy

COLLEGE: Teachers College

DATE: May 2020

PAGES: 156

This study examined the nature and extent of partnerships between public high schools, higher education, and local industry in the geographic region known as the "Rust Belt" and how those partnerships served for the betterment of the local community and social mobility for students enrolled in College and Career Readiness (CCR) curricula. This study adds to a body of literature that indicates that partnerships are needed for community revitalization and for success of CCR curriculum (Darling-Hammond, Wilhoit,, & Pittenger, 2014; Thomson, 2002& 2005). The research design utilized was a mixed-methods exploratory design with qualitative interviews conducted, coded, and analyzed prior to creating quantitative research questions. A survey was emailed to 5,019 public high school principals and career center directors throughout the region known as the Rust Belt (Wisconsin, Michigan, Indiana, Ohio, Pennsylvania, New Jersey, and New York). After data cleaning, there were (n=435) valid responses for a response rate of 9.1%. Findings in the qualitative indicated that students, schools, and Rust Belt communities benefit from the partnerships but face several obstacles - financial resources and transportation creating the largest barriers. The quantitative portion of this study revealed that partnerships are occurring, barriers of transportation and a lack of financial resources for both students and schools are present throughout the region, communities are benefitting, and Neoliberal Educational Policies (NEP) are creating obstacles to partnering. This study concludes that Rust

Belt students, schools, communities, industry, and higher education benefit from partnerships; however, as reported by participants, the benefits due to barriers and NEP have created unequal partnerships in which higher education benefits the most while contributing the least in the Rust Belt.

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CHAPTER I INTRODUCTION

The United States Industrial Revolution (1790s - mid-1900s) changed the American landscape and altered life in every aspect from the economy, politics, to the cultural fabric of everyday life and individual social mobility opportunities. As the United States transitioned from a predominantly agrarian society to an industrial powerhouse, the population layout shifted from rural locales to urban centers. Due to waterways that made transportation of materials easier coupled with the availability of coal, the region surrounding the Great Lakes became known as the Industrial Belt as it was ideal for industrialization (Garreau, 1982). The population of the region drastically increased during industrialization with migration from the South and immigration from Europe due to the availability of employment and opportunity for upward social mobility (Garreau, 1982).

Industrialization caused the growing of infrastructure including interstates, highways, inexpensive automobiles, and the development of the suburbs. As the economy grew so did the social mobility in the Industrial Belt. The population of the Industrial Belt was able to buy automobiles and move out of the urban centers to the developing suburbs. This move out of the urban centers began what sociologists call "urban flight." Changes in global economics, transportation, and government policy furthered the migration of the middle class from former industrialized urban areas and ultimately resulted in urban decay (Piiparinen, Russell, & Post, 2015).

The deindustrialization of the Industrial Belt region began as early as the 1950s, though it is argued that the process began in the 1970s due to the post-Vietnam war recession (Rowthorn, & Ramaswamy, 1997).. However, research and data indicate that because the leading industries of steel and auto faced little to no labor and/or product competition they faced little to no

incentive to innovate or become more productive (Alder, Lagakos, & Ohanian, 2014; Ohanian, 2014; Ohanian & Holmes, 2014; Holmes, & Schmitz Jr, 2010). Despite housing the largest and most profitable businesses in the world, such as U.S. Steel and General Motors and 43% of the United States jobs in the 1950s, research indicates that the lack of innovation, productivity, increasing conflict with labor unions, fluctuating production, and enactment of federal labor policies all aided in the deindustrialization of the Industrial Belt (Alder, Lagakos, & Ohanian, 2014; Ohanian, 2014; Ohanian & Holmes, 2014; Holmes, & Schmitz Jr, 2010; Garreau, 1982). The effects of deindustrialization gained the region the new name the "Rust Belt".

Statistics indicate that the Rust Belt residents suffered and continue to suffer socially as a result of deindustrialization. According to the Center for Disease Control (CDC), rates of poverty in the Rust Belt region are still significantly lower than the Southern region of the United States (Centers for Disease Control and Prevention [CDC], 2019). Datum also indicates that the infant mortality and deaths due to opioid use is higher in the Rust Belt region compared to other regions of the country (Scholl, Seth, Kariisa, Wilson, & Baldwin, 2019; The Institute for Health Metrics and Evaluation, 2017). The research linking deindustrialization to increasing crime is extensive. According to the Federal Bureau of Investigations uniform crime reports of 2017, 5 of the top 15 most dangerous (number of violent crimes per 100,000 people) cities are in the Rust Belt region (Federal Bureau of Investigation, 2017).

At the time of this writing, the Bureau of Labor statistics indicate that the Rust Belt has a regional average unemployment rate of 3.9% a lower rate than the current 4% national average (Bureau of Labor Statistics, 2019). Research also indicates that compared to other regions, the Rust Belt region is experiencing the largest growth in manufacturing (Kotkin, 2018). Yet researchers have demonstrated that the growth in jobs and the lowering of unemployment rates

should be interpreted while also considering a decrease in available employees (Kotkin, 2018). The availability of unskilled, low-skilled, and trades certified employees is a serious cause of concern in a growing economy.

Schools and students across the country have struggled to keep up with the increased academic requirements amid decreases in funding and resource availability. Students and schools in deindustrialized areas have been found to go without much needed social services and academic resources (Thomson, 2005;2002). The CDC statistics indicate that the Rust Belt region contains a higher rate of attention deficit hyperactivity disorder (ADHD) diagnosis and medication among school aged children compared to other regions (CDC, 2018). This data also indicates that schools within the Rust Belt utilize behavioral therapy at an alarming lesser rate than medication. Six states within the Rust Belt region have legislation in place and have exercised that legislation to takeover schools for academic and/or financial underperformance (Morel, 2018). Morel (2018) found that schools and districts that have been taken over by states have student bodies that are made up of high diversity, high rates of poverty, and need access to more social services and academic resources.

Keeping in mind the increase in employment opportunities, the decrease in available workers, and a lack of social mobility for many students, federal policy was enacted and mandated that states and districts implement curricula that ensures social mobility for students in terms of college and career readiness (CCR). CCR curriculum is vital to the continued efforts to revitalize the Rust Belt region. Yet researchers have found that in the Rust Belt region, curriculum, like many social services and resources, often highlight what *was* needed versus what *is* currently needed (Thomson, 2005;2002; Garreau, 1982).

Research indicates that partnerships are needed for community revitalization just as much as they are needed for success of CCR curriculum (Darling-Hammond, Wilhoit, & Pittenger, 2014). However, a gap in the research exists in terms of to what extent and how these partnerships intersect to create not only revitalization but student social mobility.

Purpose

This mixed-methods exploratory study attempted to gain an understanding of the nature and extent of partnerships between public high schools, higher education, and local industry in the geographic region known as the "Rust Belt" and how those partnerships served for the betterment of the local community and social mobility for students enrolled in College and Career Readiness curricula. The following section identifies the research questions guiding this study.

Research Questions

The following research questions were addressed in this study.

Central Question

How do the subsets of human geography, namely social and economic geographies shape the partnerships among school districts, higher education, and industry for students enrolled in College and Career curriculum in the Rust Belt region?

Sub-questions

1. How do public high school College and Career Readiness building administrators define partnerships?
2. What community revitalization advantages do College and Career Readiness school administrators in the Rust Belt region see in partnerships?
3. How do College and Career Readiness students benefit from partnerships according to public high school College and Career Readiness curriculum administrators in the Rust Belt region?
4. What social and economic barriers exist in partnerships according to public high school College and Career Readiness building administrators' experience in the Rust Belt region?

Additional research questions emerged during the qualitative data collection portion of this study and are discussed in Chapter 3.

Significance of the Study

Concern about the next generation's workforce skills and abilities has propelled College and Career Readiness (CCR) into mainstream educational conversations. These on-going conversations ultimately led to the CCR mandate. This study targets a specific population of students who, because of where they live and go to school, need the skills and abilities addressed in these CCR programs. It is this critical need for strong CCR program impact that will ultimately ensure that students possess the needed workforce skills and abilities and have the potential to revitalize a region hardest hit from deindustrialization. This study also contributes to the body of literature that has previously examined what is lacking in community revitalization and CCR by adding a regional perspective on what barriers to effective partnering exist regionally.

Delimitations

The delimitations of this study include time, location, sample, and program specifications. This study took place from August 2018 to February 2019. The location of the study included public high schools within the Rust Belt region states of Wisconsin, Michigan, Indiana, Ohio, Pennsylvania, New Jersey, and New York. The sample consisted of public high school level building administrators and included high school level Career and Technical Education Directors. This study focused solely on College and Career Readiness programming and curriculum. Delimitations are detailed further in Chapter 3 of this study.

Definition of Terms

This study utilizes the terms Rust Belt, deindustrialization, urban decay, and College and Career Readiness. Given the myriad ways in which these terms are often used and defined, the definitions as utilized in this study are provided below.

Rust Belt

The phrase Rust Belt references a region of the United States once deemed the Industrial Belt but has been plagued with deindustrialization, a decrease in population, a decline in area economics and labor. The phrase originated from the presidential campaign of Walter Mondale in 1984. While addressing steelworkers in Cleveland, Ohio Mondale stated, "Mr. Reagan's policy toward the industrial belt of America is 'Let it rust' (*The New York Times*, 1984). Mondale later referenced the iconic Dust Bowl imagery of the Great Depression and referred to the area as the "Rust Bowl". The term rust belt evolved through reporting of the campaign and the fight for union workers in once booming industrial areas. The Rust Belt encompasses the region of the North-Eastern United States, the Great Lakes Area, and the Midwestern region of the United States. This area was once the epicenter of industry due in large part to the easy transport of materials through the waterways of the Great Lakes (Benton-Short, 2013; Garreau, 1982). Once deemed the Industrial Belt, when industries began to move operations overseas the area was and remains marked with sharp urban decay. Though there are many thoughts on what states and regions of particular states encompass the Rust Belt (Benton-Short, 2013; Lawrence & Edwards, 2013; Cayton, Sisson, & Zacher, Eds, 2006; Garreau, 1982), in terms of this study the states of Wisconsin, Michigan, Indiana, Ohio, Pennsylvania, New Jersey, and New York were considered the Rust Belt.

Deindustrialization

Deindustrialization refers to the social and economic changes in an area caused by a change in or removal of industrial activities (Lawrence & Edwards, 2013; Cayton, Sisson, & Zacher, Eds, 2006). It is the antithesis to industrialization and has been shown to cause urban decay and urban blight.

Urban Decay

The phenomenon of urban decay occurs when a once thriving city loses population, industry, experiences an increase in crime, and a devaluation of property. Because of the industrial revolution and the growing of infrastructure including interstates, inexpensive automobiles, and the building of the suburbs the exodus from the urban area began as what sociologists call "urban flight". Continued changes in global economics, transportation, and government policy furthered the migration from former industrialized urban areas and resulted in urban decay (Piiparinen, Russell, & Post, 2015). Cities plagued with urban decay typically have high rates of poverty, unemployment, abandoned structures, and experience political disenfranchisement as the political policies created often ensure further decay.

In this study, the focus of the social and economic changes caused by the removal of industrial capacity is used.

College and Career Readiness

College and career readiness became a matter of educational policy and a measure for accountability with the enactment of No Child Left Behind (NCLB) in 2001. NCLB states that every student should be educated in a manner that ensures that they are college and career ready (Bush, 2001). Currently Marc Tucker (2013), President of the National Center on the Economy and Education, loosely defines college and career readiness as possessing the skills required to pass a credit-bearing course at a community college. This definition is mirrored by the United

States Department of Education's definition of Career and Technology Education (CTE). CTE additionally offers students the ability to learn skills applicable to employment such as basic employability attributes. This current definition and application of CTE has been transformed from what CTE originated. Initially CTE was meant to train individuals in the trade fields such as construction, welding, etc. Though trade professions are still present in CTE programs, the emphasis is now placed on career pathways which adhere to the United States Department of Labor's occupation growth predictions while also adding the ability for students in the trades to further their education in post-secondary institutions if they choose (United States Department of Education, 2014). The states utilized in this study (Wisconsin, Michigan, Indiana, Ohio, Pennsylvania, New Jersey, and New York) have all implemented CCR accountability measures that encompass dual credit or Advanced Placement courses as well as career-based measures such as career based courses and/or workforce internships or certifications. Tucker's definition, as it encompasses the Federal Department of Education's definition of CTE, is utilized in this study.

Organization of Study

The remainder of this study is divided into four additional chapters, references, and appendices. Chapter 2 reviews the current and relevant literature pertaining to college and career readiness and the Rust Belt. Chapter 3 describes the sample and methods that was used to collect pertinent data. Instruments to collect data are also discussed in this chapter. The analysis and discussion of the data is presented in chapter 4. Chapter 5, the concluding chapter, contains a summary of the research findings, conclusions, and recommendations. The references and appendices are included at the end of this study.

CHAPTER II LITERATURE REVIEW

Despite an increase in population during the Industrial Revolution (early 1800s to the 1970s) in the Rust Belt region of the United States, deindustrialization and a changing economy caused many Rust Belt communities to become plagued with declining property values, crime, drug abuse, a lack of social services, and a lack of production-based industry (Thomson, 2005; 2002; Garreau,1982). Though revitalization efforts have been effective in several Rust Belt cities, the strife felt at the onslaught of deindustrialization is still being felt throughout the Rust Belt.

Rust Belt schools faced increased educational requirements while funding decreased; the result is students experiencing an increased need for services and resources that become scarce with funding decreases (Thomson, 2005;2002). Though social class expectations have been found to be established outside of the school setting, educational institutions help to maintain the expectations through the curriculum and instruction (Lareau, 2011; 2003; Anyon,1981; 1980; Willis, 1977). Education is a key element to increased social mobility (Weber, 1978; 1947) and regions that have experienced high levels of deindustrialization often struggle to provide upward or even horizontal mobility. Federal policy mandates the implementation of a curriculum that ensures social mobility for students in terms of college and/or career readiness (CCR) programming. Research, however, indicates that CCR programming and curriculum is not preparing students for college and/or career due to a lack of partnerships (Darling-Hammond, Wilhoit, & Pittenger, 2014). More so, the CCR programming/ curriculum in many districts is not representative of local or regional labor markets. CCR programming is vital to the continued efforts to revitalize the Rust Belt. A common issue for Rust Belt residents and schools within the region is that what is currently needed mirrors what was once needed. CCR

programming/curriculum in the Rust Belt highlights this discrepancy between what was needed and offered and what currently is needed (Garreau, 1982).

Purpose

The purpose of this review of the literature was to bring depth to the discussion and debate the educational effects of Rust Belt deindustrialization through organization and association of the research. This review was narrowed by focusing on research that was attentive to the social and economic impacts of deindustrialization in cities and regions and how those effects in turn affected schools and College and Career Readiness curriculum. This review also included research that supported how economic and social effects changes how curriculum and instruction are delivered in schools. This review of the literature was an attempt to answer the following questions:

1. How does the social geography of the Rust Belt impact the social mobility of students intended by CCR curriculum?
2. How does the economic geography of the Rust Belt impact the social mobility of students intended by CCR curriculum?
3. How does Neoliberal Educational Policy affect the intended social mobility opportunities for students?

Theoretical Framework

Sub-fields of human geography and social mobility theory formulate the theoretical perspective of this review. The utilization of these theoretical lens allowed for a better organization and association of the literature as it pertains to the educational impact of the deindustrialized region of the Rust Belt.

Human Geography

Given the interest in College and Career Readiness curriculum in the Rust Belt, the sub-theories of human geography are used as a theoretical framework for this review and for the

larger study. The discipline of geography underwent change once it was admitted into academia as a legitimate field of study (Gregory, 2009). Human Geography encompasses many other disciplines within the social sciences, humanities, and natural sciences. Geography examines among other things theories of region, place, and population mobility and displacement as well as economic and sociological structures of the regions as human geography holds that the geography shapes all other things and that the actual physical location is only one factor in forming an area (Gregory, 2009; Bonnett, 2008; Walford, 1996). For this review of the literature the geographical subfields and theories of sociology and economics will be used to examine the geographical characteristics and factors of Rust belt communities that affect the College and Career curriculum.

Social Geography. Social geography examines the social contexts, processes, and relations in each place. It is the focus on place that separates social geography from sociology itself. Though social geography was always a theoretical part of the human geography field, it did not become a sub-field until geographers Wreford Watson, Max Sorre, and Emrys Jones in the late 1950s and early 1960s discussed how social geography should move away from landform explanations and the emphasis on social contexts and more towards landforms and the emphasis on social processes (Ley, 2009). Social geography continued to transform over the decades and its importance was revitalized in the 1990s due to an increased focus on cultural geography, a human geography sub-field that shares much of the same concentrations (Ley, 2009). Social geography will be used as an analysis of how the geographical landforms and spaces affect the social processes in the Rust Belt as it relates to College and Career curriculum.

Economic Geography. Economic geography is concerned with places where economic activities are carried out and the description of such places (Gregory, Johnston, Pratt, Watts, &

Whatmore, 2009). The theoretical subfield of economic geography differs from the economics discipline as it considers the places and spaces in which economic activity occurs and not the formulae or rigidness of economics. Economic geography has come under much scrutiny as a discipline due to the ever-changing nature of what it examines; however, the field dates to the 1880s. Economic geographer Karl Gotz coined the field as commercial geography and applied it as the study of the natural world that influenced the production and movement of commodities. Since then the field has evolved into economic geography but maintained some of Gotz's stance that it is the study of the natural world's impact on production and movement of goods (Gregory, et. al., 2009). Over the 20th century, economic geography grew to include how the natural world effects the economic structure of a given place and space. The economic geography on how the natural world has affected and will continue to affect the Rust Belt region is applied in terms of educational and regional decay and initiatives.

By positioning the literature through the social and economic geographies lens, it permits an avoidance of over simplistic explanations while also challenging the over-generalizations made about schools and learners within the region. Examining the literature through the lens of social and economic geographies helps to attend to the complexities of the region and how the region interacts with educational curricula.

Social Mobility Theory

The theory of social mobility refers to the movement from one social class to another according to an individual's social background (Blau & Duncan, 1967). Social mobility is often attributed to education levels, family social class, occupation, and income. Social mobility theory originated as an element of social stratification theory. Social stratification theory, a part

of Karl Marx's conflict theory, examines the hierarchical arrangement of classes and/ or groups within a given society.

Conflict Theory. Social conflict theory is a Marxist- based theory that states that individuals interact in society not by consensus but rather based on conflict. The theory originated by Karl Marx in his work *The Communist Manifesto* published in 1848. Marx argued that class conflict in society was a result of resources being unjustly distributed among the bourgeoisie (owners of the means of productions) and the proletariat (the working class and the poor) (Marx & Engels, 1967; Marx & Engels, 1848). Marx argued that the unequal distribution of resources is maintained through "superstructures" or political structures, social institutions, and culture, and is perpetuated by the philosophical compulsion of the bourgeoisie that determined the values, expectations, and conditions of the culture and larger society (Marx, 1867). Conflict theory argues that social stratification is an element of the unequal distribution of resources.

Social Stratification Theory. Social stratification theory, an element of Marx's conflict theory, states that for the bourgeoisie to maintain power and control over society, the ranking or stratification of groups is necessary. Though the idea of social stratification was first developed and argued by Plato, Karl Marx and Max Weber continued the defining of social stratification and are often looked to as making the most significant contributions to the theory. According to Marx, with the spread of capitalism social classes diminished to two distinct groups - the bourgeoisie and the proletariat (Marx & Engels, 1967; Marx, 1868; Marx & Engles, 1848). Through the exploitation of the proletariat through minimum wages, alienation from the product/ work/ profit, false consciousness, and class consciousness the bourgeoise can maintain the social stratification (Marx & Engels, 1967; Marx, 1868; Marx & Engles, 1848). Weber, however,

argued a multidimensional level of social stratification and disagreed with Marx that the economy should not be the sole focus of social stratification. Weber argued that social stratification is dependent upon social relationships and the consequences that those relationships posed from an economic standpoint. Weber's multidimensional model argues that an individual's position in the economy (class), social prestige (status), and power (ability to make others do things against their will) create a life chance of prosperity (Weber, 1978; Weber, 1947). Weber believed that it was not necessary to possess high levels of all three dimensions to gain prosperity. Social mobility, then is the ability to change position within the stratification.

Social Mobility Theory. Social mobility theory originated as an element of social stratification theory. Social mobility, the ability to move to different social stratification levels, is dependent upon an open stratification system (Prais, 1955). An open stratification system, like capitalism, allows for movement between stratification levels by attributing value to achieved social characteristics. Social mobility can be structural, changes in the stratification of entire groups, or individual, changes in status for the individual. Social mobility theory contains several patterns:

1. *Vertical mobility*: Vertical mobility refers to the status movement from one stratification level to another. Vertical mobility can be upward or downward,
    a. *Upward mobility*: Upward mobility is the ability to move up from one's social stratification,
    b. *Downward mobility*: Downward mobility is movement down from one's social stratification;
2. *Horizontal mobility*: Horizontal mobility refers to status movement within the same class categorization;

3. *Intergenerational mobility*. Intergenerational mobility is a change in status that occurs over the course of generations;
4. *Intragenerational mobility*. Status mobility that occurs within the same generation is referred to as intragenerational mobility;
5. *Absolute mobility*. Absolute mobility is the number of individuals that obtain a different layer of stratification than that of their parents.
6. *Relative mobility*. Relative mobility refers to the differences in probability of attaining a certain outcome, regardless of structural changes.

(Prais, 1955).

Social Mobility theory was applied as a manifestation of regional social and economic geographies that impact educational settings. The application of Social Mobility theory in this way allowed for a more thoughtful examination of how the region impacts students in schools.

Neoliberal Educational Policy

The current educational policies and reform efforts are under the guise of Neoliberalism. With an increasing effort from state and federal governments to ensure that schools are performing and improving, curriculum has become a central theme in performance and improvement efforts. The Neoliberal standardization of curriculum has become central to the reform, performance, and improvement measures.

Though there is much debate about the origins of and definition of Neoliberalism, the theory was first evident as an economic plan roughly established by Adam Smith in 1776. In his book, *The Wealth of Nations*, Smith argued that an ideal economic plan would be a system that was beneficial to all parties where there were no government interventions in terms of tariffs and restrictions on manufacturing should be removed for optimal economic development, i.e. free

trade (Shah, 2010; Clarke, 2005). Smith's plan for free trade helped to create modern day capitalism; however, as capitalism was not an inevitable plan for economic development, it was quickened through colonialism (economically exploiting an occupied land) and mercantilism (free trade; commercialism) (Shah, 2010). Neoliberalism in the United States picked up momentum as a result of The Great Depression and President Franklin D. Roosevelt's New Deal. The common belief is that the stock market crash of 1929 led to The Great Depression. However, economists disagree about the causes of The Great Depression, whether it was a crisis of overproduction and reduced consumption or whether it was purposefully caused by banks to further along capitalism (Harvey, 2005). As a result of The Great Depression, President Roosevelt established the New Deal which formed federal programs to assist the American people and the country for the economy to recover from the economic depression that plagued the country. The New Deal remained active until World War II. Economists of the time implemented Keynesian principles, named for economist John Maynard Keynes, which were a set of principles meant to prevent another economic crisis by regulating capitalism. These principles (lowering unemployment, raising wages, and increasing consumer demands for goods) ensured economic growth and social-wellbeing and became a class compromise between capital and labor that would off-set further instability. According to Harvey (2005), the Keynesian principles became known as "embedded liberalism", embedded into society as a form of capitalism constrained by politics and devoted to social welfare through regulation. Embedded liberalism however had already begun in the heart of the Rust Belt region, when in 1914 Henry Ford, after raising wages to stabilize his workforce, created the Socialization Organization (CWeik, 2014; Worstall, 2012; Brueggeman, 2000). Ford's Socialization Organization ensured that workers complied with character requirements which incorporated the regulation of social

welfare of Ford's employees (CWeik, 2014; Worstall, 2012; Brueggeman, 2000). Embedded liberalism strengthened the middle class through providing a decent wage that allowed for the consumption of mass-produced goods. The Keynesian principles were widely applied after WWII throughout the United States and Europe to guarantee economic stability and social welfare in the hopes of preventing another world war. It was during this time that the World Bank, the World Trade Organization, and the International Monetary Fund organizations were created to assist with government payment problems and to encourage reconstruction and development in Europe after WWII (Harvey, 2005).

As a result of economic stagflation (high inflation and economic stagnation) in the 1970s, Neoliberalism was able to quietly take-over as the ruling economic plan in the United States. Though economists disagree as to why stagflation occurred, many agree that to some extent it occurred due to the cost of the Vietnam War and the attempt by President Richard M. Nixon to pay the deficit created by the war by removing the gold standard from monies (money was no longer backed by gold). This unpinning of the dollar to gold caused the price of gold to increase while the value of the dollar decreased. In addition to the debt created by the Vietnam War was the oil crisis of 1973 which caused prices of oil to increase while production and economic growth decreased (Harvey, 2005). Some economic scholars however argue that the stagflation of the 1970s was caused by too much regulation and taxes placed on the wealthy. This view was widely accepted especially by the wealthy that under embedded liberalism they had lost some of their class power (Harvey, 2005). As Neoliberalism is grounded in manufactured crisis, the wealthy were able to use this argument of taxing the wealthy and regulation to dismantle embedded liberalism. Through the presidencies of Nixon, Reagan, George HW Bush, Clinton, and George W. Bush and the appointed Chairmen of the Federal Reserve (Paul Volcker and then

Alan Greenspan) the leveraged crisis was corrected using Neoliberal ideologies supported by economists such as Milton Friedman. These corrections to stagnation included the raising of interest rates, the cutting of taxes for the wealthy and capital gains, and the deregulation of the financial sector (Harvey, 2005). The idea was that by decreasing the regulation and tax on the wealthy the savings would trickle down to the rest of society. Though these policies had a devastating effect on the working class, as taxes and interest rates were raised and the demonization of labor unions as "bureaucratic" and "stifling" began, the removal of embedded liberalism had occurred (Harvey, 2005).

It is through the Neoliberal economic policies of deregulation that the regulation of public services occurred. Neoliberalism and the deregulation of the financial sector and on trade, which ultimately fueled the housing crisis in 2008, also sought to regulate public services. Then President William J. Clinton signed the welfare reform program, The Personal Responsibility and Work Opportunity Act, in 1996 that placed tighter guidelines on public services under the Neoliberal guise of American values.

Neoliberalism Educational Policy theory ends the debate between Postmodernism and Post-structuralism theories as "in classical liberalism the individual is characterized as having an autonomous human nature and can practice freedom ... in neoliberalism the state seeks to create an individual that is an enterprising and competitive entrepreneur" (Kaščák & Pupala, 2011, pg.148). This idea that the views of self-concept and self-perception that were prominent in Postmodernism and Post-structuralism led to an educational system that was dependent upon interpretation by the individual albeit student, teacher, local government, etc. The lack of continuity in curriculum and theory and the rise of a more transient population led to a disjointed system and curriculum (Perkins-Gough, 2004). Moves in curriculum plans and application of

Neoliberal ideas long existed in education. For example, when Russia launched Sputnik the government wanted the curriculum to include more math and science and President Jimmy Carter called for a "Back to Basics" curriculum plan in response to the rising unemployment rates of the 1970s. The bipartisan reauthorizations of the Elementary and Secondary Education Acts of 1965 with No Child Left Behind (NCLB) under President George W. Bush in 2001 and then again under President Barak Obama with Every Student Succeeds Act (ESSA) in 2015 continued the Neoliberal takeover of public services. Though Neoliberal ideals had been present in educational debate for decades in reaction to crisis, NCLB and ESSA put into law accountability and standardization. These ideas were further perpetuated through President Obama's program of Race to the Top. These programs became "string" control for the federal government where conformity was tied to funding (Ingersoll, 2009). Neoliberalism in education uses rhetoric of parental choice, failing, school and teacher accountability, and school competition to appeal to the American values of individual freedom to perpetuate financial gain and control over the public service of education.

Neoliberalism as curriculum theory states that the curriculum must be mutually beneficial to all parties involved (Small, 2009). With the inclusion of College and Career Readiness curriculum mandates and accountability measures in place for the curriculum, the current curriculum looks to ensure that students possess what they need to be a competitive entrepreneur/ laborer. Neoliberal curriculum is standardized and assessed to garner data in order to rank schools and students.

Neoliberalism is successful due to the rhetoric used in perpetuating the ideology of American values, for example the terms "human capital", "individual liberty", "American

values", "individual freedom", and "partnerships". This study examines the Neoliberal theory in terms of partnerships in College and Career Readiness in the Rust Belt region.

Literature Selection and Review Methodology

This review focuses on peer-reviewed articles with the inclusion of books that were deemed scholarly in nature. Though no adherence to publication date was given in the selection of the literature due to the limited amount of research focused on education within the Rust Belt region, preference was given to research that was empirical in nature.

The methodology used in obtaining research to examine and include in this review consisted of key word and combinations of key word phrases database searches (ERIC, Web of Science, Google Scholar, etc.), relevant organization websites, and print material. These keywords and phrases included but were not limited to: United States Rust Belt, Rust Belt, industrialization of the Rust Belt, deindustrialization of the Rust Belt, industrialization, deindustrialization, Rust Belt social mobility, education in the Rust Belt, schools in the Rust Belt, college and career readiness, college and career readiness in the Rust Belt, and social mobility and college and career readiness. Results were then scanned for primary sources and determined if they were relevant to this study based on focus. After the initial review of the research and the identification of recurrent themes in the literature, articles were then reread to identify what themes were supported in the article.

Limitations

Research examined and used in this review aligns with the theoretical framework. The limitations of this study result from a substantial lack of research available on education in the Rust Belt. Much of the available research on the Rust Belt comes from other fields and focused

on economics, labor market, industry, and urban and community planning. Research from other fields is usable and helpful when researching specific concepts and theories as it relates to the region and schools located within the Rust Belt. Though some promising research on schools and education in the Rust Belt exists, it is not as plentiful and focuses on urban education or in Rust Belt regions outside of the United States. The sole focus on the Rust Belt region while excluding other regions within the United States Rust Belt region also serves as a limitation of this literature review.

Themes

The review yielded many findings that clustered in relation to three overarching themes, each of which connected back to the theoretical framework and the stated interest in College and Career Readiness in the Rust Belt. The subsequent sections address the themes and findings. Absolute social mobility opportunities for residents of Rust Belt communities declined due to the social and economic outcomes of deindustrialization. In a qualitative examination of the Rust Belt, Garreau (1982) argued that the sole point of living in the region was abundance of quality employment opportunities that offered a level of social mobility that other regions did not. During industrialization, many minorities from the South migrated north to the Rust Belt for work as the land in the South was overworked. Additionally, many Europeans immigrated to the Rust Belt for employment opportunities in the growing steel industry. Many that remained in the South sought education while their peers sought employment therefore also increasing their absolute social mobility opportunities. Yet the delayed social mobility offered through educational pursuits in the South was in sharp juxtaposition to the immediate opportunity for social mobility that employment in the Rust Belt region offered. As deindustrialization began for the region, the population began to steadily decrease as the opportunities for social mobility

quickly lessened due to the loss of employment opportunities. Despite the migration of the populous out of the Rust Belt, Garreau noted that at the time of publication (1982) the Rust Belt was still the most populated of the nine "nations" or regions of the United States and still controls most of the basic industry in terms of late 19th and early 20th century industry. Despite the lack of reliability due to generalizability, Garreau's findings have been supported through other studies (Alder, Lagakos, & Ohanian, 2014; Ohanian, 2014; Ohanian & Holmes, 2014; Holmes, & Schmitz Jr, 2010). Yet scholars have noted that those that did leave the region were better positioned to leave due to an existing social stratification level (Alder, Lagakos, & Ohanian, 2014; Ohanian, 2014; Ohanian & Holmes, 2014; Holmes, & Schmitz Jr, 2010). Therefore, much of the population left in the Rust Belt region after the peak years of deindustrialization were those that lacked the fundamental social stratification level to migrate to another region for continued social mobility via employment opportunities (Alder, Lagakos, & Ohanian, 2014; Ohanian, 2014; Ohanian & Holmes, 2014; Holmes, & Schmitz Jr, 2010). The migration of industry and population from the Rust Belt became the reality for the Rust Belt region. In fact, the region has been deemed the "New South" (Garreau, 1982).

Once deindustrialization occurs in a community or region, the phenomenon of urban decay begins to overcome the area and impact the social processes of the community. Communities plagued with urban decay typically have high rates of poverty, unemployment, abandoned structures, and experience political disenfranchisement as the political policies created often ensure further decay. A 2017 quantitative study that examined 96 major Rust Belt cities in the United States found that as population decreased not only did the blight increase, but the rates of poverty increased to a level deeming many of the cities "the poorest" in the country (Knaus, 2017). Unemployment rates in the Rust Belt continue to rise and represent an average

well above the national average of 20%. However, statistics show that while economic growth in manufacturing and trade employment continues to grow, the growth is not rapid (Knaus, 2017). The urban decay and blight within the Rust Belt have resulted in increased numbers of deaths mainly attributed to drug addiction (Knaus, 2017).

The urban areas of the Rust Belt region are associated with "Black Ghettoes," racism, and fear (Garreau, 1982). These neighborhoods in Marxism terms represent the lumpenproletariat – a social class that is unlikely to ever achieve social mobility. Though the lack of social mobility may not be completely attributed to the lack of employment opportunities and education in the Rust Belt neighborhoods, the lack of social mobility persists. The liberal social services that were founded on and supported by the educated middle class do not understand poverty, therefore it is argued that the social services offered to those in poverty are meant for nothing more than to employ the educated middle class (Garreau, 1982). Thomson (2005; 2002) found that many of the social services offered to those in communities impacted by deindustrialization had been privatized and when available, not affordable to many in the communities. In fact, Garreau (1982) found that many of the middle-class social service workers he encountered in the Rust Belt communities were stricken the hardest with poverty "label[ed] poverty as a manifestation of parental irresponsibility" (pg. 92).

Though scholars note that the loss of population, decline of residential property values, and reduced social services were not solely caused by the deindustrialization and urban decay brought on by deindustrialization, the industrial revolution and the growing of infrastructure including interstates, highways, inexpensive automobiles, and the building of the suburbs laid the groundwork for the exodus from the urban area. This initial exodus began as what sociologists call "white flight." Continued changes in global economics, transportation, and government

policy furthered the migration from former industrialized urban areas and resulted in urban decay (Piiparinen, Russell, & Post, 2015). Additionally, sociologists termed the migration of the educated or skilled middle class out of the urban areas as "brain drain". This migration is a result of the building of suburban areas and urban decay has caused further social and economic decay of the deindustrialized urban areas indicative of the Rust Belt.

Deindustrialization however does not solely account for all the problems and issues residents of the Rust Belt experience, as unemployment and poverty rates in the region are still considered lower than in the South (Alder, Lagakos, & Ohanian, 2014; Ohanian, 2014; Ohanian & Holmes, 2014; Holmes, & Schmitz Jr, 2010; Garreau, 1982). Though many of the industries left the region, manufacturing jobs still exist in the region and revitalization efforts have transformed several of the Rust Belt cities (Alder, Lagakos, & Ohanian, 2014; Ohanian, 2014; Ohanian & Holmes, 2014; Holmes, & Schmitz Jr, 2010). In fact, many argue that there is a viable job market in the Rust Belt; however, sustainability is questionable due to the lack of a qualified workforce (Alder, Lagakos, & Ohanian, 2014; Ohanian, 2014; Ohanian & Holmes, 2014; Holmes, & Schmitz Jr, 2010; Garreau, 1982).

Efforts to revitalize the Rust Belt have resulted in gentrification and changes to the effected communities. Re-urbanization efforts have brought educated individuals back into urban areas; however, research has found that they are often young professionals that are not long-term residents of the urban area as once they begin to age and/or have children, most opt to migrate to surrounding suburban areas for better schools and less crime (Mitra, Movit, & Frick, 2008). The inability to maintain an educated, skilled, or middle-class populace in urban areas results in continued urban decay.

Impact on Schools

The lack of a qualified workforce leads to an examination of schools within the Rust Belt. Research reveals a major portion of equity issues that limit social mobility in deindustrialized areas. These issues exist under the umbrella of economic constraints for school districts. Policies enacted by state and federal governments have increasingly required more funding and resources, yet funding has consistently been decreased (Thomson, 2005). Schools in the Rust Belt areas are plagued with an overwhelming majority of students needing additional services but are required to do so without additional funding. Deindustrialized areas have a substantial inequitable access to resources. However, the research also indicates that equity issues caused by financial constraints are largely dependent upon the size of enrollment, personnel structure, the financial health of the district prior to and following urban decay, and the access to resources.

Enrollment. The size of the student body or enrollment refers to the average number of students in daily attendance (ADA). This count collected by individual districts and states is done to ascertain the number of students enrolled in a district and afterward count dictates how much money the school will receive from the state as schools per student with additional monies given per special education students and in some areas English Language Learners. Additional monies through Title programs from the federal government is allotted but subject to stricter guidelines on how the money can be applied/ used by districts. Keating & Seminar (2007) found in examination of Cleveland schools that as the industries closed and the population declined so did the enrollment in the public schools, which led to continued financial and eventual programming issues for the district. Keating and & Seminar's findings have been echoed in a substantial amount of research indicating that the decrease in enrollment due to deindustrialization and urban decay causes an eventual increasing decline in enrollment due to brain drain, voucher initiatives, school choice, and increased enrollment in area private schools

(Piiparinen, Russell, & Post, 2015; Thomson, 2005 & 2002; Mitr & Frick, 2011; DeSena & Ansolone 2009; Van Tassel & Grabowski, 1996). The emigration of the educated and middle class to the suburbs removes resources from the school in terms of property taxes and donations of money or time (Keating& Seminar, 2007). Voucher initiatives and school choice are both highly debated issues that allow for parents to choose the school which their child attends, whether private with the assistance of vouchers or other public schools. Under these programs' money allotted from the government to the school, follows the student to the new school. These programs then create a decline in both enrollment and funding to the area schools. Enrollment in private schools increases as urban decay increases, however, Keating & Seminar (2007) points out that in the case of Cleveland once urban decay began to cause safety concerns for residents, enrollment declined to the point of consolidation and closure of the area parochial schools due to brain drain. As enrollments decline in deindustrialized areas, the need for funding increases as the students that are left enrolled represent families that are in abject need of services (Thomson, 2005). Research indicates that the smaller the student body or enrollment the higher the per pupil cost (Stiefel, Iatarola, Fruchter, & Berne, 1998). This higher cost per pupil ensures inequitable resources, though government funding is per pupil it does not add additional monies for smaller total student body size. Though as Reschovsky & Imazeki, (1997) argued "there is not a one-to-one relationship between spending and educational outcomes… two districts with equal spending per pupil reveals that educational performance may be lower in one of the districts if the costs of providing any given level of education are higher in that district, or if that district is more inefficient in its use of resources." Even as enrollment and funding declines, schools are expected to maintain programming and accountability measures at the same or even increased levels (Thomson, 2005). As Thomson further points out in his 2002 and 2005 studies

of Rust Belt areas in Australia, the lack of funding creates an even greater burden considering that the students that are left after urban decay are often from families in serious need of services which the community and/ or schools can no longer provide.

Personnel Structure. The personnel structure of a school district prior to urban decay causes financial problems following deindustrialization especially when the restructuring does not commensurate with a decrease in enrollment and area population. Logically, the larger the school district the more personnel employed by the district. As urban decay causes a decline in enrollment the result is too many personnel positions. Districts often resist reductions in force as it leads to a negative connotation for the district and community (Thomson, 2002). As schools are often viewed as one of the community resources used in sustainability and revitalization efforts, a negative connotation of personnel management in the deindustrialized area prevents sustainability and revitalization efforts. However, the reduction in force is necessary for the overall fiscal health of the district. Thomson (2002) found that Rust Belt districts often responded to increased accountability policies by hiring more administrators and laying off teachers. Thomson's findings are supported by researchers Waite and Allen (2003) who argued that when financial constraints were placed on districts, the inclination towards financial mismanagement increased in terms of human resources decisions. Decisions to lay off teachers and support personnel instead of reducing and restructuring the administrative structure not only costs the district more money but also creates tension between the district and instructional/ support personnel as well as the community. Using Cleveland as an example, yet present in many deindustrialized areas, human resource decisions to not restructure and reduce the administrative team in lieu of reducing instructional and support is viewed as personnel

mismanagement of finances that results in further urban decay and brain drain (Piiparinen, Russell, & Post, 2015; Kellogg & Keating, 2011; Waite & Allen, 2003).

Financial Health of District. Van Tassel & Grabowski (1996) and Kellogg & Keating (2011) in an examination of Cleveland public schools and ample amount of research on other districts within deindustrialized areas show that school districts are typically in considerable debt when deindustrialization and urban decay begins. Through industrialization and economic growth, areas took on considerable amounts of debt to accommodate for a growing enrollment (Van Tassel & Grabowski, 1996). However, as deindustrialization and economic stagnation typically begin slowly (due to brain drain and urban flight) and then continue quickly and abruptly, districts are often left with a financial burden and decreased funding that jeopardizes the overall financial health of the district. Thomson (2002) argues that it is not just the debt and decrease in funding that jeopardizes the financial health but the increase in policies, decrease in services, and the need for community/ parent contribution that also further jeopardizes the overall financial outlook. In fact, districts within deindustrialized areas rely heavily on book and registration fees and will often increase them as a mean to generate revenue (Thomson, 2002). Due to the community make-up and levels of poverty in deindustrialized areas districts are often unable to collect the fees. Thomson argues that a district then faces two choices: 1.) to go without the fees from parents that did not pay in hopes that non-payment of fees does not become a norm within the district or, 2.) to engage in legal collection activities that inadvertently cause increased debt for the district in terms of legal fees as the attempt to collect the fees from those that cannot pay often results in nonpayment while also adding to increased negative feelings towards the schools in the community. Districts that enter a period of urban decay in a severe financial debt ratio are often not able to recover without government intervention.

Access to Resources. A prominent theme throughout the literature is an inequitable access to resources in deindustrialized areas. Among the most crucial resources not available to students in deindustrialized areas are instructional materials, teachers, and acceptable learning environments (Ingersoll, 2004; Abel & Sewell, 1999). Due to the financial constraints of districts within deindustrialized areas, materials needed for learning and obtaining a minimally acceptable education as required by *Brown v Board of Education* does not exist. Students often lack textbooks, and seating, among many shortcomings, and must do so in minimally maintained buildings, and without the infrastructure to employ technology to "cover" for the shortcomings and lack of instructional materials. As the research indicates, maintained buildings and access to materials are directly related to student achievement and teacher retention (Ingersoll, 2004). Without access, the continuation of brain drain, and urban decay continue affecting not just the district but the entire community as well.

Instructional materials. Due to the economic structure of many districts within deindustrialized areas and the decrease in funding, a lack of access to instructional material becomes the norm for teachers and students. As Thomson (2002) found, due to financial constraints within the districts of the Rust Belt principals and boards made decisions about how to spend what meager funds there were often to the detriment of teachers and students, and instructional materials were typically given up in the finance debate. Not only does the lack of resources such as few or inadequate textbooks and seating cause an inequitable education for students in Rust Belt areas but the lack of technology and instruction in technology places students at a disadvantage to their suburban counterparts. DeSena and Ansalone (2009) and Kellogg and Keating (2011) found that the lack of resources in deindustrialized areas often led to

increased skepticism from the community and led to further urban and/or school decay as parents opted to move or opt for another area schooling option in lieu of the local districts.

Teachers. Deindustrialized areas, like many locations, lack the ability to recruit and retain qualified and effective teachers. In his study of Rust Belt schools, Thomson (2002) found that schools in the Rust Belt often receive less than two applications for open positions and that the demands placed on teachers in the area led to high turnover of both teachers and administrators. For example, one area high school had seven principals in ten years and over 30 people in three assistant principal positions (p. 112). As most teachers do not live in the Rust Belt areas, Rust Belt schools are in competition for teachers with districts with fewer demands, less problems, more resources, better pay, and closer to home.

Physical Learning Environments. The physical learning environment, the school buildings, and classrooms, in deindustrialized areas creates another financial burden and inequitable access to education for students. Research shows continually that the condition of the educational environment has an impact on student performance and recruitment/ retention of teachers. Yet this is not new. Research findings linking performance to space quality date back to the Hawthorne Studies in the 1920s and the acoustics research done by Laird in 1930. However, the United States General Accounting Office (1995) estimates that over half of the 42 million public school students attend school in a building that needs at least one or more major building component or feature extensively repaired. The building structure, overcrowding, thermal quality, illumination, and acoustics all are important factors in teacher effectiveness and student achievement, also have been documented often throughout the literature. Buckley, Schneider, and Shang (2004) conclude that United States school buildings average forty years old-just the time when rapid deterioration often begins- predict that problems with school

facilities should be expected to worsen. While considering the challenging budgetary issues facing districts in deindustrialized areas, many buildings go without repair and are in such a state of disrepair that they are often seen as dilapidated. This lack of repair, as the research has shown, has negative outcomes for student achievement. The issues in these aging buildings include electrical systems that cannot handle the use of air conditioners and computers at the same time. Most districts within Rust Belt cities cannot fund even minor repairs (Thomson, 2002).

Furthermore, the actual number of building structures a district has prior to deindustrialization causes a financial strain during urban decay. As enrollment decreases and the need to reduce personnel occurs, buildings invariably become underutilized and consolidation of schools is sought causing other buildings to sit vacant. Though buildings are considered an asset of a district, in deindustrialized areas they quickly become a financial burden and a sore point for the community in already financially strapped districts (Sugrue, 2014). The closing of school buildings has an undeniable effect on the local neighborhood (Thomson, 2002). To maintain or garner control over the finances, decisions are often made to close buildings in the neighborhoods that need the school the most as these buildings have typically gone the longest without repair.

Impact on Curriculum and Instruction

Neoliberalism as a theory of curriculum and educational policy includes the establishment of accountability through standardization and the establishment of a basic competency level. Prior to the establishment of the Neoliberal policies a high school diploma, high school GPA, and/or class rank did not have the same meaning from district to district, school to school or state to state. With the creation of the Common Core State Standards,

accountability measures and the standardization of the curriculum and assessments, the Neoliberal curriculum policies have helped to ensure that meaning of ranking data is removed from the local context and placed into a state and national context. This replacement of meaning guarantees that an individual possesses a basic level of competency. These curriculum measures help to ensure that no students are graduating from schools without basic literacy and mathematics skills needed to survive as a citizen. As grading is a subjective activity, without some true measure of basic competency students would successfully leave secondary schools without skills equivalent to graduation just as they had in the past.

The weaknesses behind Neoliberalism as a curriculum theory include the lack of social democracy aims, the perpetuation of class differences, and a lack of resources. The central aim of social democracy is to eliminate or reduce inequality however, Neoliberalism does not address the aims of social democracy therefore curriculum would be designed and/or evaluated without any attempt to eliminate or reduce inequality. Instead the belief under the theory is that if one fails it is due to the individual's lack of enterprising ability (Clarke, 2005). Neoliberalism theory perpetuates class differences through the attempt for standardization. Standardization of curriculum without attention to social democracy aims creates a system of inequality due to unequal access to resources and adequate school finance. Researchers Donehower, Hogg, & Schell (2007) argue that "Standardization" is Neoliberal code for erasing differences of culture, race, ethnicity, class, and linguistic use. The standardization of the curriculum has removed resources and allowances for students that do not fit a presupposed capitalistic mold of enterprising/ entrepreneurial. The standardization also allows for the ease of tracking students into the economic model of laborer or entrepreneur. Neoliberalism as a curriculum theory and educational policy is at the least policy driven requirements to teach/ master more material

without additional time added and with less funding. The requirement of achieving more with less has produced abject negative effects for districts, schools, and students that differ from the Neoliberal norm.

Neoliberalism as educational policy states that the curriculum must be mutually beneficial to all parties involved (Small, 2009). Neoliberalism theory perpetuates class differences through the attempt for standardization. Standardization of curriculum without attention to social democracy aims creates a system of inequality due to unequal access to resources and the lack of adequate school finance. Debate about whether the current state of government control over curriculum is liberal (Democrat) or conservative (Republican), as Pinar (2012) explains that current curriculum and educational reform is supported by both political parties, therefore the argument about whether the reform of curriculum is the product of one political party is negated. Pinar removes the reform from both political parties by stating that the reform is authoritative, thus involving both political parties. The history of Neoliberalism as an economic theory and the evolution of Neoliberalism into a social science theory established earlier in this examination, demonstrates that Neoliberalism and the attempt to standardize curriculum is the current guiding theory in education therefore all curriculum is viewed as in compliance to accountability and outcome measures or not. Ingersoll (2009) found that despite the relatively low percentage of the budget (6%) that the Federal Government gives to education, it establishes some control of education through "strings" – policy that is tied to funding and judicial rulings. The string policies help to ensure that the Neoliberal aim of education, laborer as commodity (Clarke, 2005), is achievable through college/ career readiness curricula.

With the inclusion of college and career readiness curriculum mandates and accountability measures in place for the curriculum, the current curriculum does look to ensure

that an individual possess what they need to be a competitive entrepreneur/ laborer. However, the Neoliberal curriculum, just as the Neoliberal economic theory, does not despite the policy rhetoric believe that every student will be a success. Neoliberalism removes the institution from the failing students' plight and places it back on the student by arguing that the student did not try or was not entrepreneurial enough to be successful. The same is true for failing schools, labeled through data collection, the school is seen as a failure and successful schools in similar circumstances are used to demonstrate that the school was not enterprising enough and therefore deserved whatever label attached to it (Apple, Kenway, & Singh, 2005).

As policies seek to ensure that education is mutually beneficial, it is through the curriculum that such benefit will exist. In the design of curriculum, it must be ensured to receive benefit from the government in terms of funding that the curriculum is producing students that possess the necessary skills to be college and/ or career ready. These Neoliberal curriculum initiatives include a more widely available access to Advanced Placement, Dual Credit, International Baccalaureate, and Career and Technology curriculums.

Curriculum and instruction within the context of schools has been repeatedly shown to replicate the characteristics and expectations of the predominant social class within schools. This replication of characteristics and expectations within schools decreases the likelihood of increased social mobility for students.

In the landmark study of instructional differences between social classes, Anyon (1981; 1980) found that student assignments and interactions between students and teachers were a result of the prominent social class of the student body and that these assignments and interactions often work to the detriment of the low and middle social class students.

Anyon (1981; 1980) found that in the low or working-class schools interactions between teacher and students included primarily directions and required students to follow a preset procedure while the work was often not explained, and teachers worked to control every aspect of time and space. It was noted that there was little to no give and take between teachers and students and what interaction existed was dominated by the theme of "resistance". In the middle-class school, students were taught that the work consisted of achieving the right answer and enough right answers were how students achieved good grades. The prominent theme in the interactions between student and teacher in the middle-class school was one of "possibility." In both the low - and middle- class schools, creativity was seldom a requirement. Students at both the affluent professional and the executive elite school were given work that included higher order thinking skills and had interactions with teachers where they were not told they were wrong but rather told to think about it more to achieve either a heightened sense of self or excellence (Anyon, 1981;1980). Anyon's study highlights an important aspect of how social classes experience school differently, yet the findings lack generalizability due to methodology and other landmark studies found that though schools do replicate social class reproduction and decrease the ability for increasing social mobility it has more to do with individual students and parenting than school curriculum.

In the landmark ethnographic study, Willis (1977) found that a lack of social mobility for students is sustained not by the curriculum but rather by the way individual students accept their condition through the creation of subcultures. Willis found that students resisted mental work in favor of manual work and the ideologies presented by the school in favor of practical knowledge, life, experience and "street wisdom." Even though the students acknowledged that the labor market requirements would determine the fate of their social class, the students still resisted the

mentality, discipline, and ideologies offered by the school. This resistance, according to Willis, is the thinking of the working class. The skills needed exist outside of school which leads to continued resistance by the subculture. However, as Anyon (1981;1980) found this resistance is supported by the school through interactions and work. Despite the international setting of Willis' study and low reliability due to difficult replication ability, Willis' findings indicate that characteristics and expectations of individual students from the working class often stifle social mobility.

Though research has found that the pedagogy, curriculum, and individual students own belief systems are what limit social mobility, Lareau (2011; 2003) found that it is parenting style that ultimately limits social mobility. Lareau (2011;2003) argues that there are only two social classes that researchers should concern themselves with - low and middle and that instead of just looking at income of the parents, education, and occupation are important factors in examining social class and perceptions. Findings suggest that social class expectations are replicated through parenting styles and are established and maintained inside and outside the school setting and extracurricular activities. Though sample size decreased the reliability of Lareau's study, a follow-up was done ten years after the conclusion of the initial data collection and every student had continued to replicate the social class expectations of the family (2013). The establishment and replication of social class from parenting or the home setting was also found to be a strong indicator of future social class by numerous other researchers (Bowles, Gintis, & Groves, 2009).

Rust Belt students fell victim to a secondary school curriculum established at the beginning of the industrial revolution. The German schooling model of education was implemented in the United States through the creation of junior and senior high schools, which track and funnel those students destined for higher-learning by offering different curricular

choices than those students being funneled into manual labor or low skilled job training curriculum (Kliebard, 2002). Plagued by abject poverty and a growing lack of industry, many Rust Belt cities and towns have remained stagnant in economic growth and have in many cases resulted in a decline in population as well as what many argue is an education that leads to the continuation of generational poverty. Thomson (2002) found that in Rust Belt cities despite changes in curriculum and educational policy students were still being educated as they were during industrialization.

College and Career Readiness. Though the establishment and reproduction of social class norms and expectations have been linked back to classroom instruction, the social class, and parenting style the implementation of college and career readiness (CCR) programming and curriculum is an attempt to increase social mobility for every student regardless of socio-economic status. Tucker (2013) defines CCR as having the ability to be successful in an entry level English and Math course at a local community college and argues that most students are not achieving either. CCR typically takes place in two separate locations: a career center and a traditional high school classroom. Researchers have found that students enrolled in a class at the career center focus on skills while students in the same course at the traditional high school focus on the theoretical background (Williams, 2011; Gattie & Wicklein, 2007). Many programs and courses offered through career and technology centers are now being offered for college credit to place every student on a path to higher education which is consistent with the emphasis on career pathways (Tucker, 2013). The career pathways model adheres to the United States Department of Labor's occupation growth predictions by adding the ability for students in the trades to further their education in post-secondary institutions if they choose while also affording college

bound students the opportunity to earn college credit while in high school (United States Department of Education, 2014).

Yet, despite the implementation of CCR, researchers have found that CCR is still lacking in ensuring that students are adequately prepared for college and/ or career due to a lack of partnerships, lack of continuous assessment of the programs and instruction, and continuity in growth (Darling-Hammond, Wilhoit, & Pittenger, 2014; Conley, 2013). Current research, rhetoric, and policy all emphasize the need for K-12 students to be educated in a manner that allows them to compete in a global job market. Yet the research also shows that students across the country graduating with the basic competency skills as mandated by policy accountability measures are not only unable to compete in a global job market, many cannot compete even in a local job market (Tucker, 2013; Thompson, 2002). Despite the intention, CCR curriculum is not ensuring that students are graduating college and career ready (Darling-Hammond, Wilhoit, & Pittenger, 2014; Conley, 2013; Tucker, 2013). This is especially true throughout the Rust Belt, where the populace is disenfranchised from policy initiatives for both education and industry. This disenfranchisement has currently caused a backlash in terms of policy, politics, and industry initiatives.

According to the National Center on Education, & the Economy (2008), CCR has largely been taken over by community colleges. The lack of higher education presence in many communities requires the programming to remain the responsibility of the local district or consortium of districts. As in many of the rural areas of the Rust Belt, agriculture (including meatpacking) is a primary industry, along with education, manufacturing, and medicine. The CCR curriculum often fails to focus on these industries. CCR curriculums tend to focus on technology, however the technology focus is not focused on local industry and therefore lacks

community and industry support. Technology is included in CCR programs across the region and is a major focus for both curriculum and industry. It cannot be a means to "fix" or "modernize" the curriculum (Donehower, Hogg, & Schell, 2007; Shapiro, 1998).

Partnerships. Maintaining the Neoliberal belief that curriculum should be mutually beneficial, the CCR curriculum is developed through partnership with local/ regional industry, higher education and local communities. Through these partnerships, relevant courses and opportunities in CCR are offered to students and to schools. These partnerships are as Miraftab (2004) claim, the "Trojan Horse" of Neoliberalism. These public-private partnerships have been touted as a key component to Rust Belt deindustrialization and social mobility of residents during the initial stages of deindustrialization and at the onset of urban decay (Goldstein, 2017; Desmond, 2016, Ilcan, 2009). However, Wisneiwski (2013) argues that the Neoliberal politics of partnering have acquiesced to the politics of and to the detriment of revitalization as it becomes unclear of who is benefitting and who is in control. Thomson (2005) and Ginsburg (2012) postulate that the Neoliberal act of partnering is not an act of revitalization but an attempt at globalization of schools. Public-private partnerships are crucial to CCR curriculum and programming, yet researchers indicate that these partnerships are not beneficial to schools/ education and often lack oversight (Perkins, 2015; Ginsburg, 2012). As Small (2009) found in order for revitalization efforts through partnering to be successful, it has to have the Neoliberal stance of mutually beneficial, yet Perkins (2015) argues that it is unclear as to what many of the partnerships add, if anything, to education, to schools, and to the curriculum.

Discussion

As the research has indicated the Rust Belt region, once a prime region for upward social mobility, has now become stagnate. Despite having an overall increase in population numbers during the industrial revolution, the population of the Rust Belt began to decline not long after it peaked (Thomson, 2005;2002; Garreau,1982). As individuals looked for ways to increase social mobility, the increase in employment opportunities in the region drew many individuals from other regions most notably the South and internationally (Garreau,1982). Due to the increase in technology, diminishing of natural resources, and changes in industry, deindustrialization overcame the region. Deindustrialization ultimately created a downward trend in social mobility for residents in the Rust Belt.

The decrease in social mobility was not just confined to the cities and city structures, but permeated schools within the Rust Belt too. The research has shown that schools within areas of deindustrialization are plagued with decaying buildings, high turn-over of educational faculty and staff, a lack of equitable funding, and often financial and human capital mismanagement (Thomson, 2005;2002). This permeation into Rust Belt schools has not been confined to resources and management but has also affected curriculum and instruction. Research has indicated that curriculum and instruction is largely dependent upon student SES level (Anyon, 1981; 1980). In a climate of deindustrialization where SES levels and social mobility decrease, the German model of schooling is often favored. This is problematic in a climate in which students are taught to follow directions but are not able to find sustaining employment in a historical employer base that affords the minimal cognitive functions such as following directions. Yet, research has also indicated that replication of social stratification is a result of

individual students, family, and parenting styles (Lareau, 2011; 2003; Anyon,1981; 1980; Willis, 1977). According to Weber (1978; 1947), the only way to increase social mobility is through education and relationships.

College and Career Readiness (CCR) standards were created and implemented to increase social mobility. However, research repeatedly shows that CCR curriculum and programming is not providing the needed knowledge and skills to ensure that students are college and/or career ready. Defined as the ability to pass entry level English and math courses in community college (Tucker, 2013) but implemented through trade certifications, dual credit, and Advanced Placement courses, CCR programming is not providing the skills necessary for success post high school graduation. Research indicates that this is due to lack of partnerships with higher education and industry yet may also be a result of curriculum and instructional models that look to serve an antiquated employer base (Thompson, 2002).

The most important way for districts in deindustrialized areas to address equity issues is through the forming of strong community relationships. Research has shown that the relationships formed by districts in deindustrialized areas can mean the difference between continued decline and improvement (Piiparinen, Russell, & Post, 2015; Thomson, 2002; Mitr & Frick, 201). Relationships need to be built among higher education institutions, economic boards, the community, and area businesses. Though the Council for the Accreditation of Educator Preparation (CAEP) mandates that institutions of higher education that offer educator preparation programs form relationships with area school districts; the relationship is often one-sided to the benefit of the higher education institution (Piiparinen, Russell, & Post, 2015). When a strong relationship is fostered and is mutually beneficial, higher education institutions may be inclined to offer field experiences for a multitude of academic programs within the area district,

whereas the local district can benefit from volunteering from students, assistance with recruitment, and free professional development. The possibilities for both the higher education institution and the school district are innumerable. Piiparinen, Russell, & Post (2015) found that when higher education acts as a facilitator to community change and not the director in deindustrialized areas, the change for the school district and the community results in an increase of revenue, resources, and assistance from field-specific scholars.

Often, local economic boards do not include representatives from the local school districts and if they do, they are often a *laissez faire* member. Through active participation on the local economic board, recruitment of new business and issues with existing businesses are known to the district. This allows for districts to be aware of changes and potential changes to the local economy and may be able to help them to become more proactive in decision making both through programming and finances. This becomes vital to both the district and the community as Kellogg and Keating (2011) found the number one reason for brain drain is the performance of the local school district especially in terms of teacher quality and turnover as well as a lack of curriculum offered. and resources. The benefit to the economic board and community leaders is that they have a better idea of what is occurring within the area district (s) and therefore can use the progress of the schools in talks to attract new business while marketing the school district. Too often, economic boards, while attracting new businesses, may not be able to glean a full benefit to the community because of the state of the schools. Many employees opt to live outside of the zip code of the business thus detracting from the overall health of the district and the community. Thomson (2002) found that through relationships with area businesses and individuals, districts in the Rust Belt were able to raise revenue for resources and building repairs. This finding is echoed in the findings of Mitra and Frick (2011) that found

that Rust Belt districts that were able to partner with longstanding area business, regardless of size, or with community organizations resulted in an increase in assistance to the district and a decrease in the negative outlook of the school by community members.

The literature shows the factors that prevent effective curriculum in deindustrialized areas and how CCR programming is not increasing social mobility but a gap in the literature exists on how this translates to the Rust Belt region. The following research questions were formulated from the gap in literature:

Central Question

> How do the subsets of human geography, namely social and economic geographies shape the partnerships among school districts, higher education, and industry for students enrolled in College and Career curriculum in the Rust Belt region?

Sub-questions

1. How do public high school College and Career Readiness building administrators define partnerships?
2. What community revitalization advantages do College and Career Readiness school administrators in the Rust Belt region see in partnerships?
3. How do College and Career Readiness students benefit from partnerships according to public high school College and Career Readiness curriculum administrators in the Rust Belt region?
4. What social and economic barriers exist in partnerships according to public high school College and Career Readiness building administrators experience in the Rust Belt region?

The following Chapter, 3, details the research design and methods, followed by Chapter 4 which will give the findings and results of the study. The study summary, conclusions, and recommendations will conclude this study in Chapter 5. The list of references and Appendix follow Chapter 5.

CHAPTER III METHODS

The aim of this study was to understand how the subfields of human geography, social and economic geographies, shape partnerships between school districts, higher education, and industry for students enrolled in College and Career Readiness (CCR) curriculum in the Rust Belt. Chapter III describes the research design, sample, data collection and analysis, and limitations and delimitations for this study.

The review of the literature indicated that a lack of partnerships prevents revitalization in the Rust Belt region and hinders the success of CCR programming for students and communities. A gap in the literature exists in terms of how the sub-fields of human geography shape the relationship building in the Rust Belt region.

Research Questions

Central Question

> How do the subsets of human geography, namely social and economic geographies shape the partnerships among school districts, higher education, and industry for students enrolled in College and Career curriculum in the Rust Belt region?

Sub-questions

1. How do public high school College and Career Readiness building administrators define partnerships?
2. What community revitalization advantages do College and Career Readiness school administrators in the Rust Belt region see in partnerships?
3. How do College and Career Readiness students benefit from partnerships according to public high school College and Career Readiness curriculum administrators in the Rust Belt region?
4. What social and economic barriers exist in partnerships according to public high school College and Career Readiness building administrators experience in the Rust Belt region?

Additional research questions emerged during the qualitative research methods portion of this research. The quantitative questions were developed after the qualitative data had been collected and analyzed. The quantitative questions are addressed..

Research Design

The research method used for this study is a two-phase exploratory mixed-methods design with qualitative (QUAL) interviews followed by quantitative (Quan) surveys. QUAL data will be collected and act as a guide for the quantitative research and survey questions. Specifically, the QUAL data was coded and prominent themes were used to create the quantitative research questions and survey instrumentation. As this study sought to understand issues for an entire region, generalizability is important making the quantitative aspect of this study vital. This model was also chosen due to the amount of research that indicated that mixed method design produces more reliable and rich data (Creswell & Clark, 2017; Gray, Mills, & Airasin, 2006 & 2009; Johnson, 2009; Creswell, 2003 & 2007; Johnson & Onwuegbuzie, 2004). Mixed-method research design incorporates the strengths from both methods of research, which strengthens the research findings and has also been found to reduce researcher bias due to the multiple and different methods of data collection (Gray, Mills, & Airasin, 2006 & 2009; Creswell, 2009; Johnson & Onwuegbuzie, 2004; Johnson, 1998).

Sample

The sample of this study was selected through nonprobability sampling including both purposeful and expert sampling procedures. Non-probability sampling was chosen due to it being noted as the best sampling methodology for exploratory mixed-methods research in which time and resources are limited (Johnson, 1998). Qualitative data was collected through high school level building administrators in the Rust Belt region of Indiana to the point of answer repetition. Quantitative was collected through surveys of high school level administrators throughout the Rust Belt region of the United States.

Rationale

The sample was chosen for several reasons. Rust Belt high school level building head administrators were chosen due to the responsibility of leading curricular decisions and implementation within the school setting. Research has indicated that the role of building level administrators has changed and the knowledge of and responsibility for implementation and instructional compliance of the curriculum lies with the building administrators (Glatthorn, Jailall, & Jailall, 2016; Ediger, 2014). Though typically partnerships with community stakeholders are formed by district leaders, building level administrators are better positioned to understand the outcomes, benefits, and barriers of partnerships for students enrolled in CCR. The sample of the quantitative piece of this study was determined after the analysis of the qualitative data. The quantitative sample and rationale are addressed in this chapter.

Instrumentation

The instrumentation for the study consists of researcher developed interviews and surveys. The interview questions centered on College and Career curriculum partnerships in the Rust Belt between higher education, industry, and public high schools. These questions included items about how human geography sub-fields of social and economic geographies posed potential barriers to collaboration. The interview questions are included in the Appendix of this study. The survey questions were developed from the themes uncovered in the qualitative analysis. The survey questions and protocol for the survey are included in Chapter 4 and the Appendix.

Interview questions were field tested through pilot interviews with an expert panel of three individuals from higher education and public-school districts. These include: Dr. Mark Canada, Assistant Vice Chancellor for Academic Affairs at Indiana University – Kokomo and

Mr. Andrew Wood, Principal at Middlebury High School. Feedback on the protocols, collected during the pilot interviews, was utilized in reformatting of the questions.

Validity and Reliability

Once the survey questions were developed, after the qualitative collection and analysis, they were field tested for reliability and validity. The tests of validity and reliability included content sampling, pilot interviews, and pre- and post-tests.

Data Collection

Informed consent was given to and signed by interviewees prior to the interview. Informed consent was also reviewed at the start of the interview. The interview protocol is included in the Appendix of this study. Data collection and protocols for the quantitative surveys is included in Chapter 4 and the Appendix.

Data Analysis

Data was analyzed and coded after collection.

Qualitative Analysis

The qualitative data was analyzed using open and selective coding. After the interviews were conducted and transcribed, transcription data was examined for reoccurring themes. These themes were then coded and categorized based on the theoretical concepts of social and economic geographies. The themes from the qualitative data served as a guide for the quantitative question (s) and survey instrumentation.

Quantitative Analysis

The quantitative portion of this study was driven by the qualitative findings. Quantitative surveys were sent after the data collection and analysis of the qualitative data was concluded. The following describes the quantitative research questions, instrumentation, sample, data collection, and results.

Research Questions

The quantitative research questions generated from the qualitative data are as follows:

R1: In what ways do public high schools and career centers in the Rust Belt partner with higher education and industry?

R2: To what extent do barriers prevent students in the Rust Belt from partnering with local industry and higher education?

R3: To what extent do barriers prevent schools in the Rust Belt from partnering with local industry and higher education?

R4: In what ways do communities in the Rust Belt benefit from partnering?

R5: To what extent does Neoliberal Educational Policy act as a barrier to College and Career Readiness in the Rust Belt?

Sample and Data Collection

The sample included public high school building administrators and high school level Career and Technology Education directors in the seven states that make up the Rust Belt. These states included Wisconsin, Michigan, Indiana, Ohio, Pennsylvania, New Jersey, and New York. Administrators and directors were used as they aligned with the sample from the qualitative portion of this study. Email addresses were obtained through State Departments of Education apart from the State of Pennsylvania (PADOE). PADOE does not collect email addresses as part of the contact information for schools. The list of public high schools and CTE centers was

downloaded from the PADOE website. Email addresses were acquired through an internet search of every public-school district and CTE center in PA. Surveys were emailed using Qualtrics survey software program. Surveys were emailed to 5,019 administrators and 161 bounced back as non-valid email addresses and a total of 123 opted out of the study for a total number of 4,735 potential participants. After data cleaning, there were (n=435) valid responses. Survey data collection occurred for five weeks in January and February of 2019.

Instrumentation

The instrument used for the quantitative portion of this study included a researcher designed survey. The survey consisted of demographic questions and questions centered around the concept of partnering and the theoretical concept of Neoliberal Educational Policy. (See Appendix G). Participants were offered three levels on Likert scale questions due to suggestion through the software program, Qualtrics. The three choices versus five makes for easier viewing for participants utilizing mobile devices.

Data Analysis

The quantitative analysis consisted of descriptive statistics. Due to the exploratory research design descriptive statistics were utilized due to the use of only nominal and ordinal variables. Descriptive statistics were used to determine mean number of years of experience, number of administrators based on reported locality type, and number of administrators that reported partnering with stakeholders. The frequency of barriers to partnering and the barriers by locality type will also be examined. ANOVA and post hoc tests were conducted to examine differences between localities and the dependent variables. Additional descriptive statistics include the benefits to partnering to the community and barriers experienced by schools was also

analyzed. The results of analysis follow and are broken into sections of demographic data followed by an analysis and conclusion for each research question. A discussion about the triangulation of the qualitative and quantitative date follow the quantitative results.

Limitations

The limitations of this study include sample size, response rate, participant honesty, and researcher positionality. The sample size for the qualitative interviews serves as a limitation of this study. This limitation was better controlled by using the qualitative findings to guide the quantitative portion. The response rate of school administrators, higher education administrators, and industry leaders to the survey serves as an additional limitation. The sample size mitigated this limitation. Participant honesty while answering the interview and survey questions and the assumption that the participants of the survey were the actual administrators/ leaders also served as additional limitations. An added limitation is the positionality of the researcher. The researcher has worked as a high school teacher, a Workforce Investment Case Manager, and an instructor in higher education in the Rust Belt region. K-12 education and higher education obtainments by the researcher in the Rust Belt region serves as an additional limitation related to researcher. The researcher was also raised in a home that consisted of parents that were union workers that were affected in retirement by deindustrialization. Researcher positionality was controlled through sampling validity checks. These checks included a review by a panel of experts to check for content bias in both the qualitative interviews and quantitative survey questions.

Summary

The purpose of this chapter has been to outline the methods used in this study. This study utilized an exploratory mixed method approach in which qualitative data was collected first and then coded for prominent themes. The themes from the qualitative data were then used to create the quantitative questions and instrument so to further explore the data discovered in the qualitative piece of this study. Chapter 3 has additionally explained the sample population, data collection and analysis, and the limitations and delimitations of the methodology. Chapter 4 includes the qualitative findings and quantitative results. Chapter 5 follows Chapter 4 and concludes this study. The list of References and Appendix follow Chapter 5.

CHAPTER IV FINDINGS AND RESULTS

This chapter contains the findings and results of this exploratory mixed-methods sequential study to answer the following research questions:

Central Question

How do the subsets of human geography, namely social and economic geographies shape the partnerships among school districts, higher education, and industry for students enrolled in College and Career curriculum in the Rust Belt region?

Sub-questions

1. How do public high school College and Career Readiness curriculum leaders define partnerships?
2. What community revitalization advantages do College and Career Readiness school administrators in the Rust Belt region see in partnerships?
3. How do College and Career Readiness students benefit from partnerships according to public high school College and Career Readiness curriculum administrators in the Rust Belt region?
4. What social and economic barriers exist in partnerships according to public high school College and Career Readiness curriculum administrators experience in the Rust Belt region?

Additional research questions emerged during the qualitative data collection portion of this study and guided the quantitative portion. The qualitative sample, data collection, data and analysis are presented first in this chapter. The quantitative sample, data collection, and data analysis follow the qualitative analysis. Included in this chapter is discussion of how both the qualitative and quantitative analysis conducted were consistent with the research design. Additionally, how the analysis related back to the research questions.

Qualitative

This section details the sample, data collection, and findings from the qualitative portion of this study.

Sample

Three participants were interviewed for the qualitative piece of this study. All three participants were currently employed as public high school level administrators in Indiana. Two served as traditional high school building principals and one served as a high school Career and Technology center director. All three are originally from the community in which they are employed or a neighboring community. To align with the differences in localities demonstrated in the research, one participant is employed in an urban setting, one in a suburban setting, and one in a rural setting.

Administrator 1 has served as director of a CTE center (school 1) in an urban community for five years. The surrounding community was identified as having a large percentage of population living in poverty and a lower percentage of college educated residents. Administrator 2 has served as principal for nine years at a traditional public high school (school 2) in a suburban setting. The surrounding community is primarily college-educated and middle to upper class. Administrator 3 has served as head administrator for a rural traditional public high school (school 3) for two years. School 3 was located within a community where most students remain in the community upon high school graduation, come from homes that are primarily lower middle to lower class and the parents are largely not college educated. All three schools have active partnerships with local industry, local community, and higher education.

Data Collection

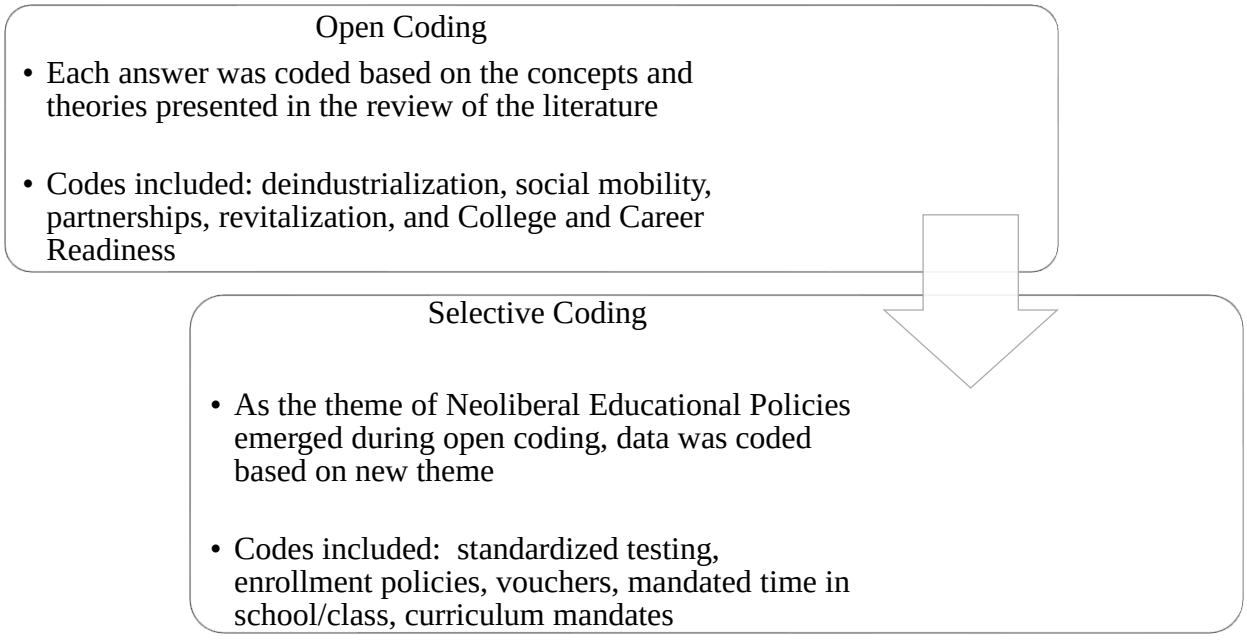
Twenty -four total superintendents were emailed for consent to conduct research within their respective districts. Consent was given by nine superintendents. Three high school administrators from the nine agreed to participate. Answer repetition occurred with three interviews. The three interviews with public high school level administrators in Indiana served as the source of qualitative data. After the three interviews were concluded the interviews were manually transcribed. After transcription, the data was coded manually. The interview questions and protocol are included in Appendix C & D.

Data Analysis

Once the interviews were conducted the interview audios were transcribed manually. After the initial reading of the transcriptions data was coded manually two times. Open coding and selective coding were used. (See Figure 1).

Figure 1

Qualitative Coding Process



Open coding was done utilizing the concepts and terms from Chapter 2 of this study. The codes consisted of deindustrialization, social mobility, partnerships, revitalization, and College and Career Readiness. Selective coding was conducted when the themes of Neoliberal Educational Policy during open coding. The codes utilized during selective coding included standardized testing, enrollment policies, vouchers, mandated time in school/class, curriculum mandates

Open Coding. Open coding was done manually after the completion of all three interviews. The results follow.

Findings

Partnerships

In terms of this study, a partnership is defined as a deliberate act of mutually beneficial give and take for the betterment of each entity. All three administrators defined a partnership as a mutually beneficial act between schools and stakeholders. Though participants were not asked to define stakeholders, each participant stated in answers that higher education, industry, and community were current active partners while Administrator 2 also identified parents as active partners. The degree to and the ways in which the entities partnered with local schools were different depending upon community type and student body make-up.

Higher Education. All three administrators stated that their schools partnered with higher education institutions. These partnerships were based on Dual Credit and/or Advanced Placement courses in which students were taught by their school faculty but receive college credit from one of five identified partners in higher education. Administrator 1 stated that one higher education partner had an individual employed to work with the school, faculty, and students with dual credit, transitioning to college but that the transition assistance was only for that institution. Administrator 3 stated that one of the higher education partners worked with the

school to adjust cost for students based on the free and reduced lunch scale. When indicating the higher education institutions that each school partnered with, Administrator 2 identified several 4-year universities while Administrators 1 and 3 identified more community colleges.

Local Industry. All school administrators interviewed stated that their schools' partner with local industry primarily in the form of internships offered to Career and Technical Education (CTE) students. Administrator 1 explained that since there is a lack of industry opportunities due to deindustrialization that the district had created a way within the school district for students to get real world experience through the district. "… our IT class our computer tech support they will work with the school's technicians on internships and go around and fix the schools IT problems" (Administrator 1). Administrator 2 shared that the district had created a way to make the partnership with local industry more accessible for both industry and the school.

> …we do have something called Curiosity and that is a partnership we have with the city and businesses where we have our own portal where businesses can connect with our school and our school can connect with businesses for either guest speakers or problem-based learning opportunities or even internships. (Administrator 2)

Community and Parental Partnerships. Community and parental partnerships occur in all three districts. Participant 1 noted that the partnership with the community incudes social service non-profits and local government where students will work with the Housing Authority to turn the numerous vacant housing into livable/ workable spaces. Administrator 3 noted that there is a "significant push from city officials to partner with the school." Administrator 2 explained the partnership the school has with parents is substantial.

> We do put on a couple of different events where parents are at the forefront, like the African American Heritage Celebration. We also partner with parents for things like school improvement, Project Lead the Way, and committees for redistricting and other sorts of things. (Administrator 2)

Unequal Partnerships. Despite the partnering the administrators identified with higher education, local industry, community and parents not all the partnerships afford each entity an equal say in how the partnership is carried out. When asked whether higher education ever supplied professional development or faculty to teach courses all three administrators stated that higher education has never offered that. Administrator 2 stated that the role of higher education in the partnerships solely consists of offering credits for courses in which a discounted tuition is paid for the course. An issue in two of the communities included a lack of industry due to deindustrialization to partner with. As one participant noted, often placing students in internships takes away employment opportunities for adults and programming can negatively affect area business.

> So, when you're talking about each one of our programs having the kids do the work instead of them doing the work, I guess that's always as fine line you always want to be careful of that you're not stealing from those partnerships. (Administrator 1)

Administrator 3 also noted that the concept of partnering with the local government is new and the push from the local government to better the programs offered at the school has helped break down barriers that existed prior. Administrator 3 also noted that industry has not always been in active member of partnering with the schools due to perceptions. "… there has been some perceived stigma that the school was a little closed off maybe not willing to be involved with

local industry or not as involved as local industry would have liked them to have been" (Administrator 3).

Student Benefits

All three of the administrators felt that the College and Career Readiness (CCR) curriculum was a benefit to students as it provides opportunities for increased social mobility for students that the traditional high school setting does not provide. CCR provides, according to administrator participants, "real world" experiences, exposure to appropriate "real-world" behavior, and access to college level courses that are more rigorous in nature than traditional high school level courses. A large benefit that participants noted was the reduced financial cost or college courses and the ability to gain certifications for free.

> There is a financial benefit to it because the classes are offered and for instance Vincennes offers college credits for $25 a credit hour. So, what normally would cost the student $300 for a 3-credit hour course is costing them $75. (Administrator 3)

As the curriculum and pedagogical strategies have changed due to a focus in increasing test scores, participants stated that the CCR partnerships have allowed for students to gain real-world experiences.

> … for a lot of our kids over 80% of them are on free and reduced lunch so just a lot of them don't know the business tone and how they talk in the business world …it provides one for us one of the big advantages for us it that gives the kids the opportunity to see what's out there and it gets the kids out there and gives them real world, real life work experience. So instead of just learning about something and it being stored away they are doing it for a real life, real project reasons… (Administrator 1)

Not only do the partnerships aid in giving the students real-world experiences but according to administrators, the partnerships allow students to increase in cognitive gain through

"…academic skills of presentation, critical thinking, problem solving, those skills become more embedded because of the real-world experiences" (Administrator 2). Administrator 3 stated that the partnerships increased a feeling for students of being more knowledgeable and better prepared for life after high school.

> … they're better prepared… they have more of an understanding of what it is they want to pursue when they get out of school because they have those opportunities to go out whether it be work based learning environment or internships those kinds of things through either that the higher education entity or through our local partners in industry. (Administrator 3)

Administrator 2 felt that partnerships and CCR increased students not just academically but also increased "their own self-image and view as they see themselves in an adult world".

Appropriate Behavior. Participants all asserted that a significant advantage for students and the CCR partnering is that it gives the students the opportunity to learn appropriate "real-world" behavior that they may not be learning in the classroom and/or school setting.

> … that's a motivator for them I think they can learn a lot about how they function in that world and maybe some of the differences and expectations in that world, we run into that quite a bit both the positive and sometimes the negative where the students have to … have to adjust their phone usage, the way they talk, the way they present themselves in that world and that's not necessarily a bad thing … (Administrator 2)

Administrator 1 stated that "…just a lot of them don't know the business tone and how they talk in the business world". The partnerships allow for students to learn not just the behavior, but the language used in the business world.

Opportunities for Mobility. The strongest benefit for students and the CCR partnering according to participants is that it often leads to offerings of full-time employment and/or starting college with course credits.

> …for some it leads into a full-time job … for example our welding program we have 3 different welding fabricators around the area that hires interns and … a good percentage of those that complete that internship are then hired on the permanent basis. (Administrator 1)

> We have students who acquire full time jobs because of internships or work-based learning situations that they get the chance to be involved in through our local industry umm the benefits that they gain from the high education entity is right off the bat they're walking into a college if they choose to go to college they're walking into those colleges with advance credits so the cost savings is there along with just a better preparedness for the rigor of the college class. (Administrator 3)

Familial Socio-economic Level. Despite the benefits for students in CCR partnering, participants indicated that student's familial socio-economic (SES) level played a role in the social mobility opportunities pursued by students in the CCR curriculum. Administrator 1 indicated that the familial SES level created barriers in terms of access.

> A lot of them don't have internet at home so umm there are some limitations there on what they can do there. We also have to be, when we are trying to provide internships, we have to be cognizant that many of our kids don't have transportation, so we have to make sure we find internships that are close to the school or help find ways to help the kids get there. (Administrator 1)

Administrator 2 indicated that the familial SES level often influenced students based on stigmas related to college.

> …we have what I would consider a large percentage of students who will be first time college students, or you know first time family members in college. So there's that social stigma that comes from the family like you know you trying to be better than me or schools not that important to a lot of families here so there is some pushback from students who we feel like would be for instance those students who might be on a technical education track or someone who might be going … for the Associates for 2 years we've noticed a little bit of pushback from student from people in the community parents especially because they're kind of breaking a social barrier that exists in their own household. (Administrator 3)

However, Administrator 3 indicated that within the district and community there exists familial SES levels that limit students pursuing career opportunities that may exist for students instead of college.

> …our community is a very primarily a college educated community so the idea is that there's intergenerational mobility that the next generation will follow the latter, so a lot of parents have it in their head that the way to do that is traditional 4 year college. And I don't necessarily think that's a bad thing when you look at the data 65% of their jobs will require a college level education but at the same time there is an overarching implication from our umm parent population that you go to a 4 year university for training so that does limit the ability for our community partners getting into it unless they're going to come back and work for the company. Sometimes that can be a real obstacle. (Administrator 2)

School Benefits

The benefits to CCR partnering that schools and districts experience are numerous. Administrators reported that through the CCR partnerships the schools can offer more rigorous courses. In addition to the more rigorous course offerings, participants reported that through the partnerships with local industry and local government the ability to offer quality internships was a benefit to the school and the district. The three administrators work in schools within the state of Indiana which allows for students to transfer between districts free of charge regardless of where the student resides. The more rigorous course offerings through the partnerships and the quality internships with higher education and industry allow the school / district the ability to attract potential students to the school and/ or district. This allows for an increased enrollment and therefore more funding from the State. Yet as Administrator 3 stated, the state policy allowing student transfers can also have the opposite effect.

> …when those funds start to get low you know those opportunities to partner because if we can't offer as much as the higher ed and our community partners can offer then at some point it becomes you know why are we not pulling our weight … (Administrator 3)

An additional benefit to the schools found in this study was the resources given to the schools/ districts by local industry. Especially through the Career and Technology Education (CTE) offering and the current funding formulas within education, many schools lack the financial means to purchase new or updated equipment needed for instruction.

> …a lot of the companies are willing to help train the kids and they are also willing to help provide equipment that keeps us modern. Umm we have a couple of HVAC companies that sponsored our HVAC program and donated equipment. A big chunk of our equipment has been donated by them… (Administrator 1)

Administrator 3 explained "…there have been instances where equipment has been donated or things of that nature. As far as financial partnerships, we are not financial partners with any of those industry entities…"

Though it was noted that often CTE students take work from local companies, Administrator 1 stated that the school and the district are often able to offer internships to CTE students when local industry is not willing, or the industry does not exist locally. "…our IT class our computer tech support they will work with the school's technicians on internships and go around and fix the schools IT problems" (Administrator 1).This type of partnering program within the district allows not only for students to gain real world experience but also benefits the school in terms of work completed by students at a reduced or no cost scenario.

Schools participate in a local economic board and/or committee that allows schools to have input in the local economy. This serves the partnership in that it allows schools input and industry/ higher education input in CCR programming.

> ... one thing we do, do is sit down with those partners a couple of times a year and see what adjustments we need to make … make sure that we are keeping the kids up-to-date and trained for the modern era. … all of our partners … have input on what we should do and what we should teach. Even though they don't have final say, they have an input… (Administrator 1)

Administrator 2 stated that once students were placed in internships geared towards computer science, the school began to realize how the internships were providing knowledge and skill that other students were not gaining in general computer classes. In acknowledging that, the school partnered further with local resources to replicate and implement knowledge and skills identified by the industry partner as necessary into the general computer science courses.

Though partner input among industry, higher education, and secondary public schools is a benefit to schools, this study found that it also acts as a barrier to partnering. The barrier exists in that the influence and input that industry and higher education have on partnering is limited by state policy and school resources.

Community Revitalization

Community revitalization in terms of this study refers to efforts to grow business and community in areas effected by deindustrialization. The intent of College and Career Readiness is to increase student skills required for success in both higher education and/ or the workforce though this curriculum also adds to the revitalization efforts in communities in the Rust Belt. Participants all indicated that the biggest benefit to CCR partnerships and the community is that when partnerships include local industry it creates a sense of community for all involved. Administrator 1 indicated that CCR partnerships helps "unify the city" continuing that "the partnership with the Housing Authority [where]they're taking a vacant building downtown and turning the upstairs into 5 apartments that are going to be rented out. So, it's helping revitalize the downtown area". Administrator 2 echoed Administrator 1 in stating that "...it just creates again a community wide campus that we all have a role in not only education but supporting our students. I definitely think that it does have a benefit to the adults in the community" (Administrator 2).

All three participants indicated that one of the most important benefits to the community and revitalization efforts is through CCR curriculum, communities can retain students as adult residents. This retention benefits communities through added population numbers and even increased industry partnerships for the community at-large.

> …a way to retain talent long term you know students leave and go to college and come back or what we see is especially in the tech industry and computer science they may offer students jobs right out of high school or definitely summer work or those types of things. (Administrator 2)

Administrator 3 stated that the training of students not only helped retain a population but also worked in retaining the financial health of the community therefore making a way to attract more business to the area.

> I think the biggest benefit to the community is just the idea that that money … like the preparedness that we are giving the kids a big deal of that is to keep them in our community and to keep that money flow in our community and to keep our kids working at those jobs that are at the higher earnings positions and so I think the biggest benefit to the community would be that it keeps our kids here it keeps our community growing… it invites other industry partners hopefully into our community to be at some point when they realize that we are training people up to be you know good employees. (Administrator 3)

Selective Coding

Selective coding was done manually after the completion of open coding as the theme of Neoliberal Educational Policy emerged during open coding. During the selective coding process, words and phrases relating to Neoliberal Educational Policy (NEP). In this study NEP refers to educational policies that increase accountability measures for schools and districts. Throughout the interviews participants referred to accountability and other policies of the state

that hindered not only CCR but in several ways also hindered partnering which in turn affected the social mobility opportunities of students. The selective coding results follow.

Policy

The state policy regarding student enrollment which allows students to transfer between districts regardless of residence has created competition amongst schools. This competition has been followed by a decrease in per pupil funding at both the state and federal levels. Administrator 3 specified that the new enrollment policy and funding levels have hindered CCR and partnerships:

> We are constantly looking for ways to increase our enrollment because of that you know whatever that figure is that comes from the state per student and we're just not realizing that … all the online schooling and the home schooling opportunities and those kinds of things … every school across state for the most part is realizing some decrease in enrollment without seeing any increase in that per pupil funding…obviously we deal with that from a financial standpoint here at the school and when those funds start to get low you know those opportunities to partner decrease.

As College and Career Readiness (CCR) as a curriculum serves as an accountability measure for schools, when enrollment decreases so does the financial outlook of a district which in turn decreases a school's ability offer CCR and be a contributing member of a partnership.

Standards

NEP dictates that schools follow standards in curriculum mapping and instruction. The policy dictating the following of standards means that CCR offerings are not always feasible which limits opportunities to partner. It also creates a scenario where higher education and industry do not have an equal input in the partnership. Administrator 1 asserted that partners

"have input but obviously we do have to follow state standards". Administrator 3 echoed that the state mandates curriculum therefore CCR and CCR partnerships must fit into those mandates.

> …our college and career readiness curriculum per say is we take that more as a we look at what the state mandates so it's not necessarily that those partnerships would be or the community is necessarily driving that curriculum … that's more driven by state standards like they are in every, every class we have to teach we look more closely at those things that is we look more closely at those state standards and what the state expects that class to look like verses curriculum that might be driven towards us by those partners.

NEP dictates school accountability through standardized testing. This mandate acts as a juxtaposition to CCR as school's accountability is measured through standardized testing scores and passing rates on Advanced Placement tests. The participants all spoke about Dual Credit (DC) courses being a large piece of the CCR curriculum, however accountability measures are not based on DC.

> … how schools were measured performance on AP exams and on standardized tests. And so a lot of our focus had previously been on those kind of things but that's how we defined ourselves because that's how schools are ranked, So it's nice to be able to go to school board and say hey we're one of the top 18 schools of the nation and ranked so and so in nation because of that AP testing. Same thing with ISTEP you know we can say certain number of our students passed ISTEP and that ranked us in the top. (Administrator 2)

Though schools are held accountable for CCR through accountability measures the true benefits of CCR creates a barrier due to the very accountability measures that mandate it.

> When we start looking at experiential education, it doesn't really fit you know we start taking dual credit offering and the kids that were taking the AP will start taking dual credit because it may be something that's in that particular class umm it may be of greater interest to them or a student …may not really rote the skill that is tested on ISTEP but he may be developing a project based learning unit with a business solving real world problems while that learning may be deeper the rote practice of that skill may be sacrificed by the time it took to do the PBL with the business. (Administrator 2)

Schedule

The scheduling of internships becomes an issue due primarily to the time of school, though not strictly adhered to by state policy in terms of the specific start and end times of a school day, these policies are primarily an expectation of parents and communities. This study found that the time that school takes place works against internships and real-world experiences.

> …scheduling, kind of along with that time to schedule piece of it you know we are a traditional schedule high school, so our kids are here from 8:15 to 2:57 every day so you know scheduling kids in during that time for those internships and work-based learning opportunities. is like most schools across state of Indiana... (Administrator 3)

Administrator 2 noted that the structure and time of school limits the extent to which students can take place in internships stating that,

> When we start working with community partners the obstacle is structure. We are very structured hourly during the day and student seat time is highly regulated… and you know the business world is a lot more informal and structure is not necessarily the case in the same way… it might be evening meetings or meetings outside the school day that many students can't participate in.

Credentialing

The credentialing of community members required by policy limits CCR. Policy mandates that those working with students in an educational setting must undergo and pass a background check in order to work with students. As internships are a school based educational activity, industry employees that will work with students must undergo the same background checks as school employees. Administrator 2 also indicated that it was not just the background checks that created an obstacle but also safety protocols.

> We also have a level of safety and security that we have to provide for our students so making sure that our community partners have background checks and follow our protocols in how they can interact with our students. (Administrator 2)

An additional obstacle for partnering and CCR created by NEP is teacher certification. Policy changes in teacher certification has created a barrier to partnering and to CCR.

> …obviously a lot of higher ed goes with a umm adjunct professor type of model at the high school level and with the new certification requirements we do not have a lot teachers that can really meet the certification requirements to continue a lot of our dual credit programs through the university. (Administrator 2)

CCR relies on Dual Credit courses as it introduces students to the rigor of college level work, allows them to earn college credit, and is a significant benefit for students and the partnerships. The certification requirements in Indiana have changed and require 18 graduate hours in the subject matter in order to qualify to be certified to teach a course. Administrator 1 stated that the partnering due to teacher certification has now made it that students sign up for the courses at the school but then take the actual courses at a local college campus.

Despite the NEP that mandates measurement in CCR and the limitedness of that policy, participants felt that the CCR and the partnerships allowed for better instruction and learning. The skills required for success after completion of high school are taught through CCR and because of NEP not necessarily taught in the traditional classrooms any longer. "… instead of just learning about something and it being stored away they are doing it for a real life, real project reasons" (Administrator 1).

> … they get a confidence in their own ability to problem solve they get a confidence in an environment in an environment where things maybe aren't as well- defined as a traditional classroom where a classroom teacher is saying here's your assignment, your due date, turn it into me, and I'm going to give it a grade. You know the business world isn't always like that, they talk about long term projects or trying to get new business. Those kinds of tasks take a little different approach but students that experience that while in high school have increased confidence when they experience it outside of school. Taking it back to college and career readiness, they're ready with a disposition they wouldn't have had if they had just learned this in a traditional classroom setting. (Administrator 2)

According to Administrator 3, CCR and the partnerships that help the success of the curriculum, though an accountability measure, is a philosophy of education.

> …we would like to call every single class, we kind of, our philosophy is that every class we have in our building or in the Career Center is some form of college or career readiness for the students. So, we are kind of viewing it that way instead of necessarily that we have that college and career readiness course, but we feel like our entire curriculum drives that. (Administrator 3)

Quantitative Results

Surveys were emailed to 5,019 public high school and career center administrators in the states of Wisconsin, Michigan, Indiana, Ohio, Pennsylvania, New York and New Jersey. A total of 161 bounced back as non-valid email addresses and a total of 123 opted out of the study for a total number of 4,735 potential participants. Survey data collection occurred for five weeks in January and February of 2019. After data cleaning, there were (n=435) valid responses for a response rate of 9.1%. The data indicated that rural traditional high school administrators were more represented in this study with a response rate of 49.7% (n=216).

Demographic Data

Of the (n=435), traditional public high school administrators represented 86.9% (n=378) of participants and 13.1% (n=57) were career center directors. Participants from rural districts included 49.7% (n=216) traditional high school administrators and 5.7% (n=25) career center directors. Suburban districts were represented by 26.9% (n=117) traditional high school administrators and 4.3% (n=19) career center directors. Urban districts had the least amount of representation with 10.3% (n=45) traditional high school administrators and 3% (n=13) career center directors. (See Table 1). The largest percentage (50.3%) of participants, both traditional high school and career center, represented leaders with 0-5 years in their current position. However, those with 6-10 years made up 26.2% and those with 10+ years made up 23.4% of participants. When asked to identify which entities the schools currently partnered with, most schools represented, partnered with higher education more than local industry or the local community. The results indicated that 79.1% (n=344) partner with local industry, 94.9% (n=413) with higher education, and 87.8% (n=382) partner with the local community. (See Table 2).

Table 1

Locality of Participants

	High school administrator	Career Center Director
Rural	217	22
	90.8%	9.2%
Suburban	117	16
	88.0%	12.0%
Urban	45	12
	78.9%	21.1%

Note: Number and percentage of participants

Table 2

Current Partnerships

	Number of participants	% of participants
Local industry	344	79.1%
Higher Education	413	94.9%
Community	382	87.8%

R1: In what ways do public high schools and career centers in the Rust Belt partner with higher education and industry?

The data indicated that the main ways in which partnering was occurring was through of dual credit courses 93.5% (n=406), community service activities 73.7% (n=320), and internships 61.5% (n= 267). Partnerships in the form of programming decisions 39.2% (n= 170), courses taught by industry or college employees 41.0% (n=178), and apprenticeships 41.5% (n= 180) represented the lowest ways in which participants reported engaging in partnerships. (See Table 3).

Table 3

Reported Current Ways of Partnering

	N	%
Dual credit courses	406	93.5%
Internships	267	61.5%
Apprenticeships	180	41.5%
Programming decisions	170	39.2%
Curriculum decisions	189	43.5%
Financial resources	212	48.8%
Teaching material resources	183	42.2%
Courses taught by industry or college employees	178	41.0%
Student mentoring by industry or college employees	191	44.0%
Community service activities	320	73.7%

Because the review of the literature indicated a difference in Rust Belt localities, the independent variable of locality (rural, suburban, urban) was split in order to give disaggregated results in terms of the ways in which schools partner based on locality. The data even when separated by locality showed that dual credit courses (rural 95.9%, suburban 91.9%, and urban 84.5%), community service (rural 71.5%, suburban 77.2%, and urban 72.4%), and internships (rural 55.8%, suburban 70.6%, and urban 62.1%) are the prominent means in which schools participate in partnerships. (See Table 4).

Table 4

Partnerships Disaggregated by Locality

	N			%		
	Rural		Suburban		Urban	
Dual credit courses	232	96.2%	125	91.9%	49	84.5%
Internships	135	56%	96	70.6%	36	62%
Apprenticeships	99	41%	56	41.2%	25	43.1%
Programming decisions	85	35.3%	56	41.2%	29	50%
Curriculum decisions	92	48.2%	66	48.5%	31	53.4%
Financial resources	123	51%	61	44.9%	28	48.2%
Teaching material resources	98	40.7%	55	40.4%	30	51.7%
Courses taught by industry or college employees	87	36.1%	59	43.4%	32	55.2%
Student mentoring by industry or college employees	84	34.9%	76	55.9%	31	53.4%
Community service activities	173	77.8%	105	77.2%	42	72.4%

Note: Percentages and totals are based on responses.

R2: To what extent do barriers prevent students in the Rust Belt from partnering with local industry and higher education?

The student barriers identified in the qualitative of this study were utilized to formulate quantitative research question number two. Participants were asked to what extent each barrier (poverty, lack of financial resources, transportation, lack of business skills, lack of industry language, lack of academic skills, and parental influence) created an obstacle for students participating in College and Career Readiness opportunities created through partnerships. The selection options were rarely, about half the time, and most of the time. According to participants, the variable of lack of academic skill rarely (55.3%) acted as a barrier. As Table 5

shows, the percentage of participants that reported parental influence as a barrier for students indicated that many participants felt that occurred about half the time or most of the time.

Table 5

Student Barrier of Parental Influence

	Frequency	Percent
Rarely	189	43.0%
About half the time	180	40.9%
Most of the time	60	13.6%

The data revealed that the barriers that represented the largest percentages in half the time and most of the time included poverty (67%), lack of financial resources (73%), lack of industry language (64%) , and lack of business skills (65.2%). (See Appendix H). Transportation (About half the time 48.1%, Most of the time 29.9% = 78%), according to participants, was the most substantial barrier for students. (See Table 6).

Disaggregating the data by locality indicated that there were differences among student barriers present in rural, suburban, and urban communities in the Rust Belt. (See Table 7, and Appendix H). The consistent barrier across all three localities was transportation. (See Table 6). Rural participants indicated that “rarely” (53.3%) does a lack of academic skills in rural Rust Belt communities present a barrier for students in CCR partnering however, participants indicated that every other barrier other than a lack of academic skills occurs “about half the time” and “most of the time”. Rust Belt suburban community participants indicated that the barriers students experienced were transportation and financial resources. Unlike rural and suburban communities, participants from Rust Belt urban communities indicated that every barrier existed “about half the time” and “most of the time” for students. (See Appendix H).

Table 6

Student Barrier of Transportation

		Transportation		
		Rarely	About half the time	Most of the time
Rural	Count	53	116	71
	% of Total	12.3%	26.9%	16.4%
Suburban	Count	35	72	27
	% of Total	8.1%	16.7%	6.3%
Urban	Count	7	20	31
	% of Total	1.6%	4.6%	7.2%
Total	Count	95	208	129
	% of Total	22.0%	48.1%	29.9%

Due to the differences found when frequency and descriptive tests were performed, a post hoc test was conducted to examine if a statistical difference occurred between groups. There was a statistically significant difference between groups as determined by one-way ANOVA in the all the variables of student barriers; poverty ($F(2,427) = 15.770$, $p = .000$), lack of financial resources ($F(2,426) = 11.832$, $p = .000$), transportation ($F(2,429) = 9.179$, $p = .000$), lack of business skills ($F(2,425) = 6.103$, $p = .002$), lack of industry language ($F(2,422) = 9.180$, $p = .000$), lack of academic skills ($F(2,427) = 12.913$, $p = .000$), and parental influences($F(2,426) = 14.716$, $p = .000$). (See Table 7).

Table 7

ANOVA Locality and Student Barriers

		Locality				
		Sum of Squares	df	Mean Square	F	Sig.
Poverty	Between Groups	15.864	2	7.932	15.770	.000
	Within Groups	214.778	427	.503		
	Total	230.642	429			
Lack of financial resources	Between Groups	11.780	2	5.890	11.832	.000
	Within Groups	212.071	426	.498		
	Total	223.851	428			
Transportation	Between Groups	9.083	2	4.541	9.179	.000
	Within Groups	212.241	429	.495		
	Total	221.324	431			
Lack of business skills	Between Groups	5.592	2	2.796	6.103	.002
	Within Groups	194.698	425	.458		
	Total	200.290	427			
Lack of industry language	Between Groups	8.967	2	4.483	9.180	.000
	Within Groups	206.083	422	.488		
	Total	215.049	424			
Lack of academic skills	Between Groups	9.434	2	4.717	12.913	.000
	Within Groups	155.982	427	.365		
	Total	165.416	429			
Parental influence	Between Groups	13.584	2	6.792	14.716	.000
	Within Groups	196.625	426	.462		
	Total	210.210	428			

A Tukey post hoc test revealed that there was no statistically significant difference between urban poverty and rural poverty (p = .074), urban and rural lack of financial resources (p = .078), rural and suburban transportation (p = .179), rural and urban lack of business skills

(p = .685), rural and urban lack of industry language (p = .064) and, rural and suburban lack of academic skills (p = .142). All other comparisons between independent variables of locality and dependent variables of student barriers were statistically significant. (See Table 8).

Table 8

Post Hoc Locality and Student Barriers

Tukey HSD

						95% Confidence Interval	
	(I) Locality of school	(J) Locality of school	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Poverty	Rural	Suburban	.338*	.077	.000	.16	.52
		Urban	-.227	.104	.074	-.47	.02
	Suburban	Rural	-.338*	.077	.000	-.52	-.16
		Urban	-.566*	.112	.000	-.83	-.30
	Urban	Rural	.227	.104	.074	-.02	.47
		Suburban	.566*	.112	.000	.30	.83
Lack of financial resources	Rural	Suburban	.277*	.076	.001	.10	.46
		Urban	-.225	.104	.078	-.47	.02
	Suburban	Rural	-.277*	.076	.001	-.46	-.10
		Urban	-.502*	.112	.000	-.76	-.24
	Urban	Rural	.225	.104	.078	-.02	.47
		Suburban	.502*	.112	.000	.24	.76
Transportation	Rural	Suburban	.135	.076	.179	-.04	.31
		Urban	-.339*	.103	.003	-.58	-.10
	Suburban	Rural	-.135	.076	.179	-.31	.04
		Urban	-.473*	.111	.000	-.73	-.21
	Urban	Rural	.339*	.103	.003	.10	.58
		Suburban	.473*	.111	.000	.21	.73
Lack of business skills	Rural	Suburban	.225*	.074	.007	.05	.40
		Urban	-.082	.099	.685	-.32	.15
	Suburban	Rural	-.225*	.074	.007	-.40	-.05
		Urban	-.307*	.107	.012	-.56	-.06
	Urban	Rural	.082	.099	.685	-.15	.32
		Suburban	.307*	.107	.012	.06	.56
	Rural	Suburban	.222*	.076	.010	.04	.40
		Urban	-.230	.102	.064	-.47	.01

Lack of industry language	Suburban	Rural	-.222*	.076	.010	-.40	-.04
		Urban	-.453*	.110	.000	-.71	-.19
	Urban	Rural	.230	.102	.064	-.01	.47
		Suburban	.453*	.110	.000	.19	.71
Lack of academic skills	Rural	Suburban	.124	.065	.142	-.03	.28
		Urban	-.358*	.089	.000	-.57	-.15
	Suburban	Rural	-.124	.065	.142	-.28	.03
		Urban	-.481*	.095	.000	-.70	-.26
	Urban	Rural	.358*	.089	.000	.15	.57
		Suburban	.481*	.095	.000	.26	.70
Parental influence	Rural	Suburban	.207*	.073	.014	.03	.38
		Urban	-.373*	.100	.001	-.61	-.14
	Suburban	Rural	-.207*	.073	.014	-.38	-.03
		Urban	-.580*	.107	.000	-.83	-.33
	Urban	Rural	.373*	.100	.001	.14	.61
		Suburban	.580*	.107	.000	.33	.83

Note: The mean difference is significant at the 0.05 level.

R3: To what extent do barriers prevent schools in the Rust Belt from partnering with local industry and higher education?

In this study, the qualitative data presented barriers that Rust Belt schools experience with partnering and CCR curriculum/ programming. The barriers found in the qualitative data were then included in the quantitative survey in order to find to what extent these barriers create obstacles for schools. The barriers included: a lack of local industry, state educational policy, transportation, curriculum and local industry need not matching, access to technology, parental support, community support, and career programming in competition with local business. Participants were asked to rank how often each variable was a barrier for the school by clicking "rarely", "about half the time", and "most of the time".

Participants indicated that the variables that rarely, compared to a combination of half and most of the time, presented a barrier to partnering included: access to technology (74.3%),

parental support (66.1%), and community support (72.3%). (See Table 9). Though the data showed that lack of local industry (M=1.84) and scheduling (M=1.89) were considerable barriers, the most substantial barriers reported by participants were lack of financial resources (M=2.12) and transportation (M= 1.98). (See Table 10).

Table 9

Reported School Barriers

	Rarely	About half the time	Most of the time
Lack of local industry	180	138	113
	40.9%	31.4%	25.7%
State education policy	195	153	75
	44.3%	34.8%	17.0%
Transportation	128	186	119
	29.1%	42.3%	27.0%
Lack of financial resources	106	169	156
	24.1%	38.4%	35.5%
Curriculum does not match with local industry need	202	178	48
	45.9%	40.5%	10.9%
Scheduling	130	218	83
	29.5%	49.5%	18.9%
Access to technology	327	85	17
	74.3%	19.3%	3.9%
Parental Support	291	115	27
	66.1%	26.1%	6.1%
Community Support	318	103	10
	72.3%	23.4%	2.3%

School barriers disaggregated by locality shows that Rust Belt rural communities experience, with about half the time and most of the time combined, a lack of industry (74.9%) more so than suburban (37.3%) and urban (37.9%) schools. (see Appendix H). With about half the time and most of the time combined, rural (79.9%) and urban (82.8%) schools experience a lack of financial resources more so than suburban (64.2%) schools. (See Table 10). Due to the differences found in the data, a post hoc test was performed to explore whether the differences were statistically significant.

Table 10

School Barrier of Lack of Financial Resources

			Lack of financial resources			
			Rarely	About half the time	Most of the time	Total
	Rural	Count	48	96	95	239
		% within locality	20.1%	40.2%	39.7%	100.0%
		% within	45.3%	56.8%	60.9%	55.5%
	Suburban	Count	48	48	38	134
		% within locality	35.8%	35.8%	28.4%	100.0%
		% within	45.3%	28.4%	24.4%	31.1%
	Urban	Count	10	25	23	58
		% within locality	17.2%	43.1%	39.7%	100.0%
		% within	9.4%	14.8%	14.7%	13.5%
Total		Count	106	169	156	431
		% within locality	24.6%	39.2%	36.2%	100.0%
		% within	100.0%	100.0%	100.0%	100.0%

ANOVA indicated a statistically significant difference between groups in lack of industry ($F(2,23.120) = 41.868$, $p = .000$), transportation ($F(2,2.943) = 5.252$, $p = .006$), lack of financial resources ($F(2,3.551) = 6.102$, $p = .002$), curriculum does not match with local industry need ($F(2,1.367) = 3.028$, $p = .049$), access to technology ($F(2,1.149) = 4.158$, $p = .016$), and parental

support ($F(2,4.501) = 13.074$, $p = .000$). ANOVA showed that there was no statistical difference between state educational policy ($p = .129$), scheduling ($p = .677$), and community support ($p = .080$). (See Table 11).

Table 11

ANOVA Locality and School Barriers

		Sum of Squares	df	Mean Square	F	Sig.
Lack of local industry	Between Groups	46.240	2	23.120	41.868	.000
	Within Groups	236.345	428	.552		
	Total	282.585	430			
State education policy	Between Groups	2.286	2	1.143	2.055	.129
	Within Groups	233.671	420	.556		
	Total	235.957	422			
Transportation	Between Groups	5.885	2	2.943	5.252	.006
	Within Groups	240.928	430	.560		
	Total	246.813	432			
Lack of financial resources	Between Groups	7.102	2	3.551	6.102	.002
	Within Groups	249.097	428	.582		
	Total	256.200	430			
Curriculum doesn't match with local industry need	Between Groups	2.734	2	1.367	3.028	.049
	Within Groups	191.855	425	.451		
	Total	194.589	427			
Scheduling	Between Groups	.383	2	.192	.395	.674
	Within Groups	207.491	428	.485		
	Total	207.875	430			
Access to technology	Between Groups	2.297	2	1.149	4.158	.016
	Within Groups	117.693	426	.276		
	Total	119.991	428			
Parental support	Between Groups	9.002	2	4.501	13.074	.000
	Within Groups	148.037	430	.344		
	Total	157.039	432			
Community support	Between Groups	1.264	2	.632	2.537	.080
	Within Groups	106.634	428	.249		
	Total	107.898	430			

A Tukey post hoc test was conducted to analyze the differences between groups of those variables found to be statistically significant in the ANOVA test. Tukey post hoc revealed that except for lack of local industry rural (p = .096), suburban (p = .154), urban (p = .985); rural and urban lack of financial resources (p = .917); rural and urban (p = .884) as well as suburban and urban (p = .421) curriculum does not match local industry need; rural and suburban (p = .156) and rural and urban (p = .224) access to technology; and, rural and suburban (p = .305) parental support there existed no statistical significant difference between groups. (See Table 12).

Table 12

Post Hoc Locality and School Barriers

Tukey HSD

						95% Confidence Interval	
	Locality of school	Locality of school	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Lack of local industry	Rural	Suburban	.653*	.080	.000	.46	.84
		Urban	.673*	.109	.000	.42	.93
	Suburban	Rural	-.653*	.080	.000	-.84	-.46
		Urban	.020	.117	.985	-.26	.29
	Urban	Rural	-.673*	.109	.000	-.93	-.42
		Suburban	-.020	.117	.985	-.29	.26
Transportation	Rural	Suburban	.167	.081	.096	-.02	.36
		Urban	-.203	.110	.154	-.46	.05
	Suburban	Rural	-.167	.081	.096	-.36	.02
		Urban	-.370*	.118	.005	-.65	-.09
	Urban	Rural	.203	.110	.154	-.05	.46
		Suburban	.370*	.118	.005	.09	.65
Lack of financial resources	Rural	Suburban	.271*	.082	.003	.08	.46
		Urban	-.027	.112	.967	-.29	.24
	Suburban	Rural	-.271*	.082	.003	-.46	-.08
		Urban	-.299*	.120	.035	-.58	-.02
	Urban	Rural	.027	.112	.967	-.24	.29
		Suburban	.299*	.120	.035	.02	.58

Curriculum doesn't match with local industry need	Rural	Suburban	.179*	.073	.038	.01	.35
		Urban	.047	.098	.884	-.18	.28
	Suburban	Rural	-.179*	.073	.038	-.35	-.01
		Urban	-.132	.106	.424	-.38	.12
	Urban	Rural	-.047	.098	.884	-.28	.18
		Suburban	.132	.106	.424	-.12	.38
Access to technology	Rural	Suburban	.105	.057	.156	-.03	.24
		Urban	-.128	.077	.224	-.31	.05
	Suburban	Rural	-.105	.057	.156	-.24	.03
		Urban	-.233*	.083	.015	-.43	-.04
	Urban	Rural	.128	.077	.224	-.05	.31
		Suburban	.233*	.083	.015	.04	.43
Parental support	Rural	Suburban	.093	.063	.305	-.06	.24
		Urban	-.372*	.086	.000	-.57	-.17
	Suburban	Rural	-.093	.063	.305	-.24	.06
		Urban	-.465*	.092	.000	-.68	-.25
	Urban	Rural	.372*	.086	.000	.17	.57
		Suburban	.465*	.092	.000	.25	.68

Note: The mean difference is significant at the 0.05 level.

R4: In what ways do communities in the Rust Belt benefit from partnering?

Research question four sought to examine the benefits that participating administrators believed that CCR curriculum partnering added to the community at-large. The results of research question one found that community service was one of the top three ways in which schools partnered (See Table 2) which would indicate that communities benefit through partnering. The data indicates that the primary community benefit that partnering creates is a sense of community (74.1%). The belief that the partnerships attract new industry into the community was held by 10.2% of participants. Despite the percentage of schools reporting partnerships with higher education (95.2%), the reported benefit of an increased attendance at higher education institutions (51.8%) falls below sense of community and increased employment for high school graduates. (See Table 13).

Table 13

Perceived Community Benefits

	Frequency	Percentage
Sense of pride in the community	326	74.1%
Increased employment for recent high school graduates	278	63.2%
Increased higher education attendance for recent high school graduates	228	51.8%
Retention of skilled workforce	161	36.6%
New industry in the community	45	10.2%

Disaggregating the data by locality demonstrates that all communities experience the same benefits at just about the same degree. (See Table 14).

Table 14

Perceived Community Benefits by Locality

	Frequency Percentage				
	Sense of pride in the community	Increased employment	Increased higher education attendance	Retention of skilled workforce	New industry in the community
Rural	180	152	119	95	16
	32.0%	27.0%	21.2%	16.9%	2.8%
Suburban	103	83	74	48	15
	31.9%	25.7%	22.9%	14.9%	4.6%
Urban	43	43	35	18	14
	28.1%	28.1%	22.9%	11.8%	9.2%

The percentage of participants that identified that CCR partnerships helped bring new industry into the community differed by locality type (rural = 2.8%, suburban = 4.6%, urban = 9.2%). Yet participants believed at a higher percentage that the partnerships helped retain a skilled workforce. (See Table 14).

R5: To what extent does Neoliberal Educational Policy act as a barrier to College and Career Readiness in the Rust Belt?

After coding of the qualitative data, Neoliberal Educational Policy (NEP) was found to be a barrier in Rust Belt CCR partnering. Research question five attempted to answer to what extent NEP acted as a barrier for schools throughout the Rust Belt region. The ordinal variables used were standardized testing, enrollment policies, CTE teacher credentialing, Dual Credit/Ap teacher credentialing, vouchers, criminal history background checks for community/ industry partners, curriculum/ programming mandated by state, and mandated time in class/ school. As in the previous questions, participants were asked to rank how often each variable was a barrier for the school by clicking “rarely”, “about half the time”, and “most of the time”.

Participants marked “rarely” at a high percentage rate for the variables of enrollment policies (58%), vouchers (83.6%), and criminal history background checks for community/ industry partners (83.4%). The data showed that the participants reported the extent of NEP acting as a barrier to CCR partnering in the Rust Belt was noteworthy in terms of curriculum/ programming mandated by state (56.6%), mandated time in class/ school (57.7%) standardized testing (51.8%), CTE teacher credentialing (57%), and Dual Credit/Ap teacher credentialing (56%). (See Table 15). When the NEP variables were disaggregated by locality, the data showed that in terms of NEP acting as a barrier, Rust Belt localities did not differ substantially.

Table 15

Neoliberal Educational Policy Barriers

	Frequency Percentage		
	Rarely	About half the time	Most of the time
Standardized Testing	204 48.4%	130 29.5%	98 22.3%
Enrollment Policies	255 58.0%	131 29.8%	44 10.0%
CTE teacher credentialing	181 41.1%	151 34.3%	100 22.7%
DC/AP teacher credentialing	186 42.3%	145 33.0%	101 23.0%
Vouchers	368 83.6%	41 9.3%	14 3.2%
Criminal history background checks for community/ industry	367 83.4%	41 9.3%	18 4.1%
Curriculum/ Programming mandates	180 40.9%	166 37.7%	83 18.9%
Mandated time in class	176 40.0%	174 39.5%	80 18.2%

A one-way ANOVA was performed to examine if there existed statistical difference between localities and NEP variables. There was a statistically significant difference between groups when compared by enrollment policies ($F(2,2.581) = 5.790$, $p = .003$), dual credit/ AP teacher credentialing ($F(2,2.418) = 3.908$, $p = .021$), vouchers ($F(2,0.896) = 4.484$, $p = .012$)

and, curriculum/ programming mandated by state ($F(2,2.265) = 4.079$, $p = .018$). The variables of standardized testing ($p = .075$), CTE teacher credentialing ($p = .234$), criminal history background checks for industry/ community workers ($p = .076$), and mandated time in school/class ($p = .484$) showed no statistically significant differences between localities. (See Table 16).

Table 16

ANOVA NEP and Locality

		Sum of Squares	df	Mean Square	F	Sig.
Standardized testing	Between Groups	3.308	2	1.654	2.602	.075
	Within Groups	272.682	429	.636		
	Total	275.991	431			
Enrollment policies	Between Groups	5.161	2	2.581	5.790	.003
	Within Groups	190.302	427	.446		
	Total	195.463	429			
CTE teacher credentialing	Between Groups	1.794	2	.897	1.458	.234
	Within Groups	264.018	429	.615		
	Total	265.813	431			
Dual Credit/ AP teacher credentialing	Between Groups	4.836	2	2.418	3.908	.021
	Within Groups	265.439	429	.619		
	Total	270.275	431			
Vouchers	Between Groups	1.792	2	.896	4.484	.012
	Within Groups	83.952	420	.200		
	Total	85.745	422			
Criminal history background checks for community/ industry partners	Between Groups	1.201	2	.600	2.595	.076
	Within Groups	97.881	423	.231		
	Total	99.082	425			
Curriculum/ programming mandated by state	Between Groups	4.530	2	2.265	4.079	.018
	Within Groups	236.538	426	.555		
	Total	241.068	428			
Mandated time in class/ school	Between Groups	.796	2	.398	.727	.484
	Within Groups	233.772	427	.547		
	Total	234.567	429			

A Tukey post hoc test indicated that no statistical significance difference existed between rural and suburban (p = .996) enrollment policies; rural and urban (p = .554) and suburban and urban (p = .624) dual credit/ AP teacher credentialing; rural and suburban ((p = .494) as well as urban and suburban (p = .097) vouchers; and, rural and urban (p = .818), urban and suburban (p = .698) curriculum/ programming mandated by state. Tukey post hoc test revealed every other between group comparison to have significant difference. (See Table 17).

Table 17

Post Hoc of Localities and NEP

Tukey HSD

	(I) Locality of School	(J) Locality of School	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Enrollment policies	Rural	Suburban	.006	.072	.996	-.16	.18
		Urban	-.321*	.098	.003	-.55	-.09
	Suburban	Rural	-.006	.072	.996	-.18	.16
		Urban	-.327*	.106	.006	-.58	-.08
	Urban	Rural	.321*	.098	.003	.09	.55
		Suburban	.327*	.106	.006	.08	.58
Dual Credit/ AP teacher credentialing	Rural	Suburban	.235*	.085	.016	.04	.43
		Urban	.120	.116	.554	-.15	.39
	Suburban	Rural	-.235*	.085	.016	-.43	-.04
		Urban	-.115	.124	.624	-.41	.18
	Urban	Rural	-.120	.116	.554	-.39	.15
		Suburban	.115	.124	.624	-.18	.41
Vouchers	Rural	Suburban	.055	.049	.494	-.06	.17
		Urban	-.156*	.066	.048	-.31	.00
	Suburban	Rural	-.055	.049	.494	-.17	.06
		Urban	-.211*	.071	.008	-.38	-.05
	Urban	Rural	.156*	.066	.048	.00	.31
		Suburban	.211*	.071	.008	.05	.38
		Suburban	.158	.076	.097	-.02	.34

Curriculum/ programming mandated by state	Rural	Suburban	.204*	.081	.031	.01	.39
		Urban	-.066	.110	.818	-.32	.19
	Suburban	Rural	-.204*	.081	.031	-.39	-.01
		Urban	-.271	.118	.058	-.55	.01
	Urban	Rural	.066	.110	.818	-.19	.32
		Suburban	.271	.118	.058	-.01	.55
		Suburban	.095	.117	.698	-.18	.37

Note: The mean difference is significant at the 0.05 level.

Limitations

There were several limitations to the quantitative research portion of this study. These limitations included the terminology "Rust Belt" as several potential participants took offense to the phrase and several did not believe that they worked in a school within the Rust Belt due to the locality (suburban and rural) of the district. Another limitation was the response rate of 9.1%. This limitation was offset by the research design and the inclusion of the qualitative interviews. An additional limitation was that participants were not asked to identify in which state they worked, only locality. The research design also serves as a limitation as it is exploratory and relies solely on descriptive statistics.

Summary

The qualitative portion of this study sought to answer the following questions:

Central Question

How do the subsets of human geography, namely social and economic geographies shape the partnerships among school districts, higher education, and industry for students enrolled in College and Career curriculum in the Rust Belt region?

Sub-questions

1. How do public high school College and Career Readiness building administrators define partnerships?
2. What community revitalization advantages do College and Career Readiness school administrators in the Rust Belt region see in partnerships?

3. How do College and Career Readiness students benefit from partnerships according to public high school College and Career Readiness curriculum administrators in the Rust Belt region?
4. What social and economic barriers exist in partnerships according to public high school College and Career Readiness building administrators experience in the Rust Belt region?

The qualitative findings suggest that public high school building administrators in the Rust Belt region define partnerships as an equal give and take where each partner benefits from the partnership. Community revitalization advantages found in the qualitative study include creating a sense of pride in the community and retaining a skilled workforce. CCR administrators that students benefit through the partnerships as it gives the students real-world experience, teaches them appropriate workplace behavior, and offers them college credits and sometimes employment. The social barriers that exist for students, as participants stated, consisted of poverty, a lack of business skills and language, parental influence, a lack of industry to partner with, and a lack of academic skills. Schools experienced partnership social barriers in terms of Neoliberal Educational Policies such as scheduling, time mandated in class, and teacher credentialing. The economic barriers experienced by CCR students in the Rust Belt that added obstacles to engaging in the partnerships were poverty, transportation, and a lack of financial resources to fully participate in the partnerships. Economic barriers experienced by the schools however consisted primarily of transportation issues. Social and economic geographies affect the way in which CCR programming in high schools partner with higher education and local industry as there as participants indicated a growth in industry in which the school and state standards did not align with, therefore the primary push was through real-world experience in terms of internships and dual credit courses.

The quantitative piece of this study was an attempt to answer the following research questions:

R1: In what ways do public high schools and career centers in the Rust Belt partner with higher education and industry?

R2: To what extent do barriers prevent students in the Rust Belt from partnering with local industry and higher education?

R3: To what extent do barriers prevent schools in the Rust Belt from partnering with local industry and higher education?

R4: In what ways do communities in the Rust Belt benefit from partnering?

R5: To what extent does Neoliberal Educational Policy act as a barrier to College and Career Readiness partnerships in the Rust Belt?

The quantitative results indicate that that Rust Belt public high schools and career centers partner in several ways with higher education and local industry, the primary ways in which they partner are through dual credit courses and community service activities, with apprenticeships and courses being taught by higher education and industry employees representing the smallest ways in which schools engage in partnerships. Transportation issues was the primary barrier preventing students from engaging in CCR partnerships though parental influence, poverty, lack of financial resources, lack of business language, and lack of business skills also created a barrier for students. The primary cause that prevents schools from CCR partnering was transportation and a lack of financial resources. This study found that Rust Belt communities' benefit from CCR partnerships primarily through an increased sense of pride in the community. The Neoliberal Education Policies of state mandated curriculum/ programming and mandated time in class were found to be the primary causes of barriers created from policy. The triangulation of data in this study finds that the qualitative findings are generalizable to the Rust Belt region.

This chapter presented the qualitative research questions and findings followed by the quantitative research method and results. A summary of the data concluded this chapter.

Chapter 5, the final chapter of this study, offers an interpretation of the data, conclusions, and recommendations. Chapter 5 is followed with the References and Appendix.

CHAPTER V CONCLUSIONS, INTERPRETATIONS AND RECOMMENDATIONS

Chapter 5 concludes this study with a summary of the problem addressed, research questions and a brief recap of the findings and results. Interpretations and the conclusions drawn from the study follow. Recommendations for future research and policy makers conclude Chapter 5.

This study attempted to gain an understanding of the nature and extent of partnerships between public high schools, higher education, and local industry in the geographic region known as the "Rust Belt" and how those partnerships served for the betterment of the local community and social mobility for students enrolled in College and Career Readiness curricula through a mixed-methods exploratory research design. The next generation's workforce skills and abilities has driven College and Career Readiness (CCR) into mainstream educational conversations. The ongoing concerns about the lack of abilities and skills ultimately led to CCR accountability mandates. This study targeted CCR students of the Rust Belt that because of the region's culture and climate, resulting from industrialization and then deindustrialization, in which they live need the skills and abilities addressed through CCR curriculum and programming. This study contributes to the body of literature that has previously examined what is lacking in community revitalization and CCR by adding a regional perspective on what barriers to effective partnering exist regionally.

The following research questions were answered through the qualitative interviews:

Central Question

> How do the subsets of human geography, namely social and economic geographies shape the partnerships among school districts, higher education, and industry for students enrolled in College and Career curriculum in the Rust Belt region?

Sub-questions

1. How do public high school College and Career Readiness building administrators define partnerships?
2. What community revitalization advantages do College and Career Readiness school administrators in the Rust Belt region see in partnerships?
3. How do College and Career Readiness students benefit from partnerships according to public high school College and Career Readiness curriculum administrators in the Rust Belt region?
4. What social and economic barriers exist in partnerships according to public high school College and Career Readiness building administrators experience in the Rust Belt region?

Quantitative research questions were developed from the findings of the qualitative portion of this study. The quantitative surveys attempted to answer the following questions:

R1: In what ways do public high schools and career centers in the Rust Belt partner with higher education and industry?

R2: To what extent do barriers prevent students in the Rust Belt from partnering with local industry and higher education?

R3: To what extent do barriers prevent schools in the Rust Belt from partnering with local industry and higher education?

R4: In what ways do communities in the Rust Belt benefit from partnering?

R5: To what extent does Neoliberal Educational Policy act as a barrier to College and Career Readiness in the Rust Belt?

Findings and Results

The qualitative portion of this study found that Rust Belt public high schools and high school level career centers do regularly engage in partnering and administrators believed that a partnership is an agreement in which every entity is working together and gaining equal benefit from the partnership. The primary ways in which schools are partnering include community service activities, dual credit, and internships. Participants indicated that the benefit to the partnerships in terms of College and Career Readiness (CCR) was that it provided them real-world experience and more rigorous coursework through dual credit courses. Yet transportation

issues, a lack of financial resources, and parental influence played a role in creating obstacles for students when it came to opportunities presented by CCR partnerships. Schools also face barriers to CCR partnering in way of transportation, financial resources, and Neoliberal Educational Policy (NEP) mandates such as scheduling, testing, teacher credentialing, and background checks for higher education/ industry partner employees. This portion of this study found that the greatest benefits to Rust Belt communities when it comes to schools, higher education, and industry CCR partnering was that it creates a sense of pride in the community and aids in retaining a qualified workforce.

The quantitative portion of this research study indicated that Rust Belt schools in each locality represented (rural, suburban, and urban) engage in partnerships primarily with community through community service activities and higher education through dual credit courses. Though the analyses showed that transportation issues were the primary barrier to partnering for students, parental influence, poverty, lack of financial resources, lack of business language, and lack of business skills also created substantial barriers for students. Data indicated that school barriers consisted of transportation issues and a lack of financial resources. Survey data results exhibited that NEP created barriers through the state mandated curriculum/ programming and mandated time in class. As the quantitative found that the primary benefit to communities was that the CCR partnerships created a sense of pride in the community, the quantitative data resulted in the same. The following sections offer an interpretation of the research, conclusions of the study data, and research recommendations.

Research Interpretations

It is important to note that the following interpretations and conclusions are likely applicable to other regions of the United States, however the focus of this study, the following

interpretations, and conclusions are focused solely on the Rust Belt region and how the CCR curriculum/ programming and CCR partnerships should, but ultimately does not, aid in community revitalization. This study found that CCR curriculum/ programming and the CCR partnerships are a Neoliberal contradiction of partnerships and policy in the Rust Belt region.

Partnerships

This study found the CCR partnerships between public high schools and career centers, industry, and higher education in the Rust Belt are unequal yet participants viewed partnerships as different entities working together for a shared goal where every entity mutually benefits. This view, which was explored in chapter 2 of this study, is accepted and supported by research (Piiparinen, Russell, & Post, 2015). Previous research indicates that CCR works best when partnerships exist and because the mandate measures dual credit and workforce certifications it stands to reason that a partnership would need to exist. Research has also found that it is through partnerships that deindustrialized communities of the Rust Belt can be revitalized through equal partnerships (Perkins, 2015; Thompson, 2005). The primary way in which participants indicated that the CCR partnerships occur in the Rust Belt is through dual credit courses (93.3%) and community service activities (73.6%) The ways in which each stakeholder benefits and how they do not benefit follows.

CCR students. The data indicated that students benefit from CCR partnerships as they provide real-world experiences that due to the very nature of schools cannot provide for students. Through these experiences' students are gaining the soft skills, such as problem-solving ability that employers are looking for in new employees (Tucker, 2013; Wagner, 2008). Students also learn appropriate behavior and language in the adult world, a skill that is not consitently taught in high schools any longer due to the metrics in which schools are held accountable. It is through

these partnerships that students are increasing their cognition due to the very nature of the work they are engaging in through internships, community service activities, and the rigor found in dual credit courses. Another benefit found in this study was that students were able to earn college credit for a reduced fee. It is through these partnerships that students are being offered opportunities to increase their own social mobility.

However, the opportunities offered to students through the CCR partnerships are often not attainable for many students. As participants in this study indicated many students in the Rust Belt are often limited in the opportunities for social mobility based on financial resources, transportation, parental influence, and policy. Dual credit course offerings, the most reported way in which schools engage in partnerships, are offered for a fee and the additional cost of a college level textbook. Many students do not enroll due to the added cost and an inability or unwillingness for parents to afford the courses. Both the qualitative and quantitative portions of this study found that transportation is in the top barrier for students engaging in CCR partnerships. As state governments continue to cut funding from education, many districts face the task of reworking budgets and additional transportation costs outside of to and from school are often reduced. This reduction leads to a lack of opportunity for students to participate fully in partnerships opportunities that would lead to increased social mobility. As previous research demonstrated (Lareau, 2011 & 2003; Anyon, 1981; Willis, 1977), this study found that administrators felt that students are often limited in opportunities due to parental influence. This study concurs with the findings of Lareau (2011), Anyon (1981), and Willis (1977) that student's social mobility and participation in opportunities to increase social mobility are often dictated by parental SES and locality. However, the very policy that requires CCR also limits students from full participation in the opportunities presented through the partnerships. Participants indicated

that scheduling and required days/ time in school often limited students in opportunities in order to comply with policy.

Schools. Schools experience some benefit to CCR partnering. Participants indicated that some opportunity for resources occurs from industry partners along with assistance from the community. As CCR is a required accountability mandate and schools often lack the monetary funds to fully engage in CCR, participants of this study indicated that local industry and the local communities often will furnish resources. The furnishing of equipment allows schools to stay up to date in their instructional materials without needing to reconfigure funding formulas to buy the resources. This also benefits the local industry in that not only does it ensure that students are being trained with the proper resources, but it also creates a tax benefit for the industry. It was also noted in this study that school's benefit when there is a gap between programming and local industry and the local industry becomes involved in creating the program with the school. Administrator 2 indicated that a local tech industry was helping to create a cybersecurity program for the students as it is a local industry need. Communities also will provide resources and assistance when able to the students and the schools. However, it appears from this study that the benefits from CCR partnerships are not completely geared towards students' social mobility or schools being able to provide social mobility opportunities.

Communities. The second most reported way in which schools engage in partnerships is through community service activities. Participants (46.4%) indicated that more than half of students remain in the community upon completion of high school. These opportunities for students to engage in community service and the sense of community it provided community members and students was the top reported benefit to the community in this study. A sense of investment in a community especially when most students remain in the community in which

they attended high school is crucial to deindustrialized areas. The community does not benefit in CCR partnerships, though most districts have locally elected school boards, the schools and boards are guided through policy and funding requirements (Ingersoll, 2009) which gives the community virtually no voice in the partnership.

Local industry. Local industry benefits from CCR partnerships in the Rust Belt region through internships. These internships allow for the industry partners to introduce students to the local companies/ industry and, as participants indicated, teach students appropriate real-world behavior, language, and soft skills that employers look for in employees. As the research indicated many employers throughout the Rust Belt are unable to find qualified workers, the introduction by industry partners allows industry to build relationships and partnerships with students. As previously stated, participants indicated that over half of the students stay in the community after high school graduation and because of that participants (37%) indicated that a benefit to CCR partnerships is the retention of a skilled workforce. Therefore, Rust Belt CCR partnerships with local industry could aid in the revitalization efforts. The partnerships, due to educational policy, are not equal in that local industry does not have any say in what is taught as schools must follow the state standards. In fact, participants in this study indicated that often curriculum and programming mandated by the state does not align with local industry and/or needs of the local workforce.

Higher Education. This study found that higher education benefits the most from Rust Belt CCR partnerships but contributes the least. As the data demonstrated, the primary way in which schools' partner within the CCR programs in the Rust Belt are with higher education through dual credit course offerings. Higher education offers a reduced fee for students to enroll in dual credit courses. Yet higher education does not provide the instructor for the course, the

school district is obligated to hire and pay the teacher or pay an existing teacher a stipend. As credentialing requirements are changed by states, many of the current dual credit course instructors become unqualified to continue instructing the courses. As Administrator 1 stated one program offered to high school students now occurs solely on a community college campus. Higher education does not contribute to the partnership outside of the college credits students earn for paying for and enrolling in dual credit. Yet higher education enrollment in the Rust Belt region is on the decline and only a little over half of the participants in this study (52%) indicated that the partnerships lead to increased enrollment in higher education.

Policy

CCR is a Neoliberal Educational Policy (NEP) meant to increase mobility for students while at the same time maintaining the Neoliberal stance of educating workers therefore ensures that students maintain their current social class or the social class of their parents. CCR mandates that students be educated for college and/or career and holds schools accountable for CCR however when examining the mandates, schools are held accountable for CCR primarily through dual credit course offerings. As previous research indicated (Darling-Hammond, Wilhoit, & Pittenger, 2014).) the success of CCR lies in the partnerships, just as the success of Rust Belt revitalization lies in the partnerships. This study finds that despite the potential of CCR policy the fact that it is not supported monetarily and that there exists additional NEP's such as standardized testing, that work in juxtaposition to CCR. It is feasible that as this study's data has indicated that CCR and other NEP mandates are counterproductive to student social mobility.

Conclusions

This study concludes that Rust Belt schools are engaging in partnerships in the Rust Belt region and those partnerships are benefiting students' opportunities for vertical and at horizontal social mobility, allowing them at the very least to maintain the social educational status as their parents. Barriers exist for students and schools in partnering and under ideal partnerships the other entities, would help to alleviate those barriers. Neoliberal Educational Policy has created a scenario within education that requires students to engage in opportunities presented through partnerships with higher education, industry, and community to engage in Project Based Learning (PBL), a proven instructional method.

CCR partnerships in the Rust Belt shows promise for revitalizing communities. However, the partnerships are not equal due to NEP that dictates what is taught and even how it is taught even when it does not align with local needs and/or industry. The Rust Belt partnerships are tilted towards benefiting higher education through dual credit and fees collected for courses without having to be responsible for instructing. As NEP changes teacher credentialing requirements for dual credit, entire programs are moved out of schools and into higher education campuses in which students can be counted in higher education enrollment numbers. CCR partnering and how those partnerships are intersecting with NEP indicates that attempts to revitalize Rust Belt communities by strengthening the local schools and ensuring equal partnerships between the schools, higher education, and industry is not happening as this study indicates that CCR partnerships are tilted in the favor of higher education. CCR and partnering requirements to ensure that CCR accountability measures are met appear to be nothing more than a NEP to assist higher education through increased enrollment numbers and tuition payments through high school students. This study supports the findings of Thomson

(2005), Perkins (2015), and Ginsburg (2012) that CCR partnerships, especially in the Rust Belt region are an act of globalization and not revitalization.

Recommendations

As a result of this study's conclusions, there exist several recommendations for future research and for policy makers. The recommendations for future research focus on the Rust Belt region and changing the research sample and research design. Recommendations for policy makers include funding and mandate changes as well as accountability measures for higher education. The recommendations follow.

Recommendations for Future Research

The limitations in this study and the final findings and results leads to several recommendations for future research. This study examined the perceptions of College and Career Readiness and partnerships held by Rust Belt region public high school and career center administrators. There exists promising research on the United States Rust Belt however the research on schools and education within the Rust Belt typically focuses on deindustrialized areas in other countries. With an overall lack of current research on the Rust Belt schools and education within the region, a recommendation for future research is to examine education and schools of the Rust Belt region.

Future research should focus on changing the sample to include higher education, industry, how industry and higher education not only view partnerships and how they benefit from the partnerships but also what barriers exist for them and how they view themselves as partners with the schools and communities. An additional opportunity for future research exists in examining ways in which higher education can become a more equal partner with communities and local k-12 schools. A better examination on how schools and partnerships can aid in revitalization would

be another recommendation. In what ways higher education benefits from and shapes Neoliberal Educational Policy for the Rust Belt region is an additional recommendation for future research.

Another suggestion for future research is to change the research design of this study and examine the barriers to CCR partnerships in the Rust Belt in more depth. As this study and the literature has shown, the separate Rust Belt localities differ in CCR opportunities for students, an opportunity for future research exists in examining the opportunities, partnerships, and CCR by Rust Belt locality in depth. Additionally, narrowing this study to specific industries and/ or states within the Rust Belt offers a potential for further research study. As the research indicated, students benefit through the partnerships as they can engage in Project-Based Learning (PBL) and more rigorous courses. Future research should focus on the extent to which teachers in the Rust Belt are utilizing PBL and whether educator prep in the Rust Belt is teaching future teachers how to instruct in PBL.

Recommendations for Policy Makers

As a result of this study, there are several recommendations for policy makers in the Rust Belt region. As College and Career Readiness (CCR) is an accountability measure and the literature and research data from this study indicates that CCR is primarily a college readiness measure yet the literature indicates that jobs are going unfilled in the Rust Belt. A recommendation for policy makers is to change the focus of the CCR mandate or remove the mandate completely. The focus of CCR being solely about college readiness negates the needs of many communities throughout the Rust Belt and sends a message to students about the employment in the trades. A takeaway from this study was the two major obstacles preventing schools and students engaging fully in CCR partnerships is a lack of financial resources and transportation. Increasing funding in both transportation and programming allows for those obstacles to be mitigated. Though previous research has shown that new and/or increased

programming is often done instead of fixing problems within a school and/or district (Thomson, 2005), the CCR mandate requires the program. Increasing funding and improving the programming in terms ensuring it is aligned with the needs of the community industry ensures the success of the CCR.

This study found that for students to gain real-world experience and experiential learning in terms of PBL students need to engage in internships with industry. It was also noted that due to standardized testing and the current instructional methods of teaching to the test, dual credit allows for students to engage in more rigorous academics. Research has shown consistently that PBL increases cognition and is the best instructional method for preparing students for standardized testing as well as offering academic rigor. Policy makers should focus on whether educator preparation programs are teaching pre-service teachers how to instruct utilizing PBL and/or increase funding for professional development programs that teach PBL methods.

As the focus of CCR is college readiness and the main avenue in which schools in the Rust Belt partner is with higher education, policy mandates should be focused on increasing accountability mandates for higher education. This study found that outside of offering credit for dual credit courses, higher education contributes little to the partnerships, yet they benefit the most. Prior research and this study found that CCR and the partnerships are primarily about increasing funding opportunities for higher education through fees charged for dual credit courses. As enrollment and student retention rates at higher education institutes continue to decrease across the Rust Belt and the country, policy makers alter the dual credit teacher credentialing requirements to increase employment opportunities for higher education faculty. If the focus of a mandate for k-12 is to increase numbers and revenue for higher education within the Rust Belt, accountability measures should be increased, and the same penalties applied to k-

12 should be placed on higher education institutions. Policy makers should require higher education faculty in those institutions receiving monetary benefit from dual credit courses to actively engage in partnerships and hold them accountable for such.

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APPENDIX A

IRB Approvals

Office of Research Integrity

Institutional Review Board (IRB)

2000 University Avenue

Muncie, IN 47306-0155

Phone: 765-285-5070

DATE:	August 6, 2018
TO:	Michelle Reichart
FROM:	Ball State University IRB
RE:	IRB protocol # 1217453-1
TITLE:	The Impact of College and Career Readiness Partnerships for School Districts Serving Students in Rust Belt Areas
SUBMISSION TYPE:	New Project
ACTION:	APPROVED
DECISION DATE:	
REVIEW TYPE:	**EXEMPT**

The Institutional Review Board reviewed your protocol on and has determined the procedures you have proposed are appropriate for exemption under the federal regulations. As such, there will be no further review of your protocol, and you are cleared to proceed with the procedures outlined in your

protocol. As an exempt study, there is no requirement for continuing review. Your protocol will remain on file with the IRB as a matter of record.

Exempt Categories:

	Category 1: Research conducted in established or commonly accepted educational settings, involving normal educations practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.
X	**Category 2:** Research involving the use of educational test (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior
	Category 3: Research involving the use of educational test (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under category 2, if: (i) the human subjects are elected or appointed officials or candidates for public office; or (ii) Federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.
	Category 4: Research involving the collection of study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or

	if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.
	Category 5: Research and demonstration projects which are conducted by or subject to the approval of Department or agency heads, and which are designed to study, evaluate or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in methods or levels of payment for benefits or services under these programs.
	Category 6: Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed which contains a food ingredient at or below the level and for a use found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

While your project does not require continuing review, it is the responsibility of the P.I. (and, if applicable, faculty supervisor) to inform the IRB if the procedures presented in this protocol are to be modified or if problems related to human research participants arise in connection with this project. **Any procedural modifications must be evaluated by the IRB before being implemented, as some modifications may change the review status of this project.** Please contact (ORI Staff) if you are unsure whether your proposed modification requires review or have any questions. Proposed modifications should be addressed in writing and submitted electronically to the IRB (http://www.bsu.edu/irb) for

review. Please reference the above IRB protocol number in any communication to the IRB regarding this project.

Reminder: Even though your study is exempt from the relevant federal regulations of the Common Rule (45 CFR 46, subpart A), you and your research team are not exempt from ethical research practices and should therefore employ all protections for your participants and their data which are appropriate to your project.

D. Clark Dickin, PhD/Chair
Institutional Review Board

Christopher Mangelli, JD, MS, MEd, CIP/
Director
Office of Research Integrity

Office of Research Integrity

Institutional Review Board (IRB)

2000 University Avenue

Muncie, IN 47306-0155

Phone: 765-285-5070

DATE:	October 31, 2018
TO:	Michelle Reichart
FROM:	Ball State University IRB
RE:	IRB protocol # 1217453-2
TITLE:	The Impact of College and Career Readiness Partnerships for School Districts Serving Students in Rust Belt Areas
SUBMISSION TYPE:	Amendment/Modification
ACTION:	APPROVED
DECISION DATE:	October 31, 2018
REVIEW TYPE:	**EXEMPT**

The Institutional Review Board reviewed your protocol on October 31, 2018 and has determined the procedures you have proposed are appropriate for exemption under the federal regulations. As such, there will be no further review of your protocol, and you are cleared to proceed with the procedures outlined in your protocol. As an exempt study, there is no requirement for continuing review. Your protocol will remain on file with the IRB as a matter of record.

Exempt Categories:

	Category 1: Research conducted in established or commonly accepted educational settings, involving normal educations practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

X	**Category 2:** Research involving the use of educational test (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior
	Category 3: Research involving the use of educational test (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under category 2, if: (i) the human subjects are elected or appointed officials or candidates for public office; or (ii) Federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.
	Category 4: Research involving the collection of study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or

	if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.
	Category 5: Research and demonstration projects which are conducted by or subject to the approval of Department or agency heads, and which are designed to study, evaluate or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in methods or levels of payment for benefits or services under these programs.
	Category 6: Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed which contains a food ingredient at or below the level and for a use found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

While your project does not require continuing review, it is the responsibility of the P.I. (and, if applicable, faculty supervisor) to inform the IRB if the procedures presented in this protocol are to be modified or if problems related to human research participants arise in connection with this project. **Any procedural modifications must be evaluated by the IRB before being implemented, as some modifications may change the review status of this project.** Please contact Grace Yoder (gmyoder@bsu.edu) if you are unsure whether your proposed modification requires review or have any questions. Proposed modifications should be addressed in writing and submitted electronically to the IRB (http://www.bsu.edu/ irb) for review. Please reference the above IRB protocol number in any communication to the IRB regarding this project.

Reminder: Even though your study is exempt from the relevant federal regulations of the Common Rule (45 CFR 46, subpart A), you and your research team are not exempt from ethical research practices and should therefore employ all protections for your participants and their data which are appropriate to your project.

D. Clark Dickin, PhD/Chair
Institutional Review Board

Christopher Mangelli, JD, MS, MEd, CIP/
Director
Office of Research Integrity

Office of Research Integrity

Institutional Review Board (IRB)

2000 University Avenue

Muncie, IN 47306-0155

Phone: 765-285-5070

DATE:	December 26, 2018
TO:	Michelle Reichart
FROM:	Ball State University IRB
RE:	IRB protocol # 1217453-3
TITLE:	The Impact of College and Career Readiness Partnerships for School Districts Serving Students in Rust Belt Areas
SUBMISSION TYPE:	Amendment/Modification
ACTION:	APPROVED
DECISION DATE:	December 26, 2018
REVIEW TYPE:	**EXEMPT**

The Institutional Review Board reviewed your protocol on December 26, 2018 and has determined the procedures you have proposed are appropriate for exemption under the federal regulations. As such, there will be no further review of your protocol, and you are cleared to proceed with the procedures outlined in your protocol. As an exempt study, there is no requirement for continuing review. Your protocol will remain on file with the IRB as a matter of record.

Exempt Categories:

	Category 1: Research conducted in established or commonly accepted educational settings, involving normal educations practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

X	**Category 2:** Research involving the use of educational test (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior
	Category 3: Research involving the use of educational test (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under category 2, if: (i) the human subjects are elected or appointed officials or candidates for public office; or (ii) Federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.
	Category 4: Research involving the collection of study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or

	if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.
	Category 5: Research and demonstration projects which are conducted by or subject to the approval of Department or agency heads, and which are designed to study, evaluate or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in methods or levels of payment for benefits or services under these programs.
	Category 6: Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed which contains a food ingredient at or below the level and for a use found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

While your project does not require continuing review, it is the responsibility of the P.I. (and, if applicable, faculty supervisor) to inform the IRB if the procedures presented in this protocol are to be modified or if problems related to human research participants arise in connection with this project. **Any procedural modifications must be evaluated by the IRB before being implemented, as some modifications may change the review status of this project.** Please contact (ORI Staff) if you are unsure whether your proposed modification requires review or have any questions. Proposed modifications should be addressed in writing and submitted electronically to the IRB (http://www.bsu.edu/irb) for review. Please reference the above IRB protocol number in any communication to the IRB regarding this project.

Reminder: Even though your study is exempt from the relevant federal regulations of the Common Rule (45 CFR 46, subpart A), you and your research team are not exempt from ethical research practices and should therefore employ all protections for your participants and their data which are appropriate to your project.

D. Clark Dickin, PhD/Chair
Institutional Review Board

Christopher Mangelli, JD, MS, MEd, CIP/
Director
Office of Research Integrity

APPENDIX B

Qualitative Recruitment Email

Recruitment Emails

Dear ***(Superintendent's name will be inserted here),***

My name is Michelle Reichart and I am a doctoral candidate from the Educational Studies department at the Ball State University. I am writing to ask for your consent to interview one of your high school administrators to participate in my dissertation research study about College and Career Readiness partnerships between high schools, higher education, and local industry in Rust Belt communities. I obtained your contact information by identifying cities most effected by deindustrialization, then identifying the local school district, and finally locating your contact information via your district's website.

If you give permission for participation in this study, I will contact your high school level building administrator(s) and upon agreement to participate s/he will be interviewed and asked 14 questions. The interview will be audio recorded and will take 30 – 45 minutes. Your district and community will not be identified in anyway.

If you consent to allowing your principals to take part in this study, as part of the research protocol I will need a signed letter from you on letterhead stating that you consent to the interviews. If you'd like to participate or have any questions about the study, please email or contact me at Michelle Reichart mltrowbridge@bsu.edu or (214) 392-9369.

Thank you very much.

Sincerely,

Michelle Reichart

Principal Investigator:

Michelle Reichart, Doctoral Candidate
Educational Studies
Ball State University
Muncie, IN 47306
Telephone: (214) 392-9369
Email: mltrowbridge@bsu.edu

Faculty Supervisor:

Dr. Jayne Beilke
Educational Studies
Ball State University
Muncie, IN 47306
Telephone: (765) 285-2561
Email: jbeilke@bsu.edu

Dear ***(Principal's name will be inserted here),***

My name is Michelle Reichart and I am a doctoral candidate from the Educational Studies department at the Ball State University. I am writing to invite you to participate in my dissertation research study about College and Career Readiness partnerships between high schools, higher education, and local industry in Rust Belt communities. You are eligible to participate in this study based on your position as a high school level administrator in the Rust Belt. I obtained your contact information by identifying cities most effected by deindustrialization, then identifying the local school district, and finally locating your contact information via your district's website.

If you decide to participate in this study, you will be interviewed and asked 14 questions. The interview will be audio recorded and will take 30 – 45 minutes. Refusal to participate will not affect your standing at your school or district. Your superintendent will not know if you participate or what you say. No identifying information such as names, school, district, or community will appear in any publication or presentation of the data.

Remember, this is completely voluntary. You can choose to be in the study or not. If you'd like to participate or have any questions about the study, please email or contact me at Michelle Reichart mltrowbridge@bsu.edu or (214) 392-9369.

Thank you very much.

Sincerely,

Michelle Reichart

Principal Investigator:

Michelle Reichart, Doctoral Candidate
Educational Studies
Ball State University
Muncie, IN 47306
Telephone: (214) 392-9369
Email: mltrowbridge@bsu.edu

Faculty Supervisor:

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APPENDIX C

Informed Consent

Consent to Participate in Research Study

Study Title: The Impact of College and Career Readiness Partnerships for School Districts Serving Students in Rust Belt Areas

Study Purpose and Rationale

The purpose of this study is to gain an understanding of the extent of partnerships among public high schools, higher education, and local industry in the geographic region known as the "Rust Belt" and to what extent the partnerships serve the betterment of social mobility for students enrolled in College and Career Readiness curricula.

Inclusion/Exclusion Criteria

To be included in this study, participants must serve as a high school level building administrator in the geographical region known as the Rust Belt.

Participation Procedures and Duration

Participants will be asked to answer 14 questions which will take 30 – 45 minutes. The questions pertain to relationships between public schools, higher education, and local industry.

Audio or Video Tapes

The audio of the interview will be recorded. The audio recordings will be destroyed after all interviews have been conducted and transcribed. The recordings will not be used for presentations or publication.

Data Confidentiality

All data will be maintained as confidential and no identifying information such as names, school, district, or community will appear in any publication or presentation of the data.

Storage of Data and Data Retention Period

Signed informed consent forms will be kept in a locked filing cabinet separated from the audio recordings and transcribed data. All data will be destroyed after the study is complete.

Risks or Discomforts

There are no perceived risks for participating in this study.

Benefits

There are no perceived benefits for participating in this study.

Voluntary Participation

Your participation in this study is completely voluntary and you are free to withdraw your permission at any time for any reason without penalty or prejudice from the investigator. Please feel free to ask any questions of the investigator before signing this form and at any time during the study. Refusal to

participate will not affect your standing at your school or district. Your superintendent will not know if you participate or what you say. No identifying information such as names, school, district, or community will appear in any publication or presentation of the data.

IRB Contact Information

For one's rights as a research subject, you may contact the following: For questions about your rights as a research subject, please contact the Director, Office of Research Integrity, Ball State University, Muncie, IN 47306, (765) 285-5070 or at irb@bsu.edu.

Study Title: The Impact of College and Career Readiness Partnerships for School Districts Serving Students in Rust Belt Areas

Consent

I, _____, agree to participate in this research project entitled, THE IMPACT OF COLLEGE AND CAREER READINESS PARTNERSHIPS FOR SCHOOL DISTRICTS SERVING STUDENTS IN RUST BELT AREAS**.** I have had the study explained to me and my questions have been answered to my satisfaction. I have read the description of this project and give my consent to participate. I understand that I will receive a copy of this informed consent form to keep for future reference.

To the best of my knowledge, I meet the inclusion/exclusion criteria for participation (described on the previous page) in this study.

_____ _____

Participant's Signature Date

Researcher Contact Information

Principal Investigator:

Michelle Reichart, Doctoral Candidate

Educational Studies

Ball State University

Muncie, IN 47306

Telephone: (214) 392-9369

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Faculty Supervisor:

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APPENDIX D

Interview Questions

The Impact of College and Career Readiness Partnerships for School Districts Serving Students in Rust Belt Areas

Public High School Administrators Interview Questions

1. How long have you been in your current position?
2. Are you originally from the area or an area similar?
3. Describe the surrounding community in which you work.

Partnerships

4. Define a partnership.
5. Does your school partner with local industry and higher education? In what ways? or Why not?
6. Do you believe that collaborating with local industry and/or higher education benefits the community? Students? How? Why?
7. Describe the benefits that your school experiences (or could experience) because of the partnership (s).
8. Describe the benefits that college and career readiness high school students experience or could experience in your community because of the partnership (s).
9. How have (or could) the partnerships informed the college and career readiness curriculum?
10. Describe the benefits to the community at-large in partnering with industry and higher education.
11. Describe any constraints to partnering with higher education and/or local industry.

Social

12. Describe the social barriers that your school or students have experienced in partnering with higher education and/or local industry.

Economic

13. Describe the economic barriers that your school has experienced in partnering with higher education and/or local industry.

14. Are there any barriers that have existed historically in your area to partnering with the local school district?

APPENDIX E

Survey Recruitment Emails

Hello:

I am a doctoral candidate from the Educational Studies department at the Ball State University. I am writing to invite you to participate in my dissertation research study about College and Career Readiness partnerships between high schools, higher education, and local industry in Rust Belt communities. You are eligible to participate in this study based on your position as a high school level administrator in the Rust Belt. I obtained your contact through your state's Department of Education website.

Participation involves taking a survey that will take no more than 15 minutes to complete. If you are interested, please click the link below to begin (alternatively, you can copy and paste the following web address into your browser):

https://bsu.qualtrics.com/jfe/form/SV_02J4a5rrzNzYf8F

If you'd like to participate or have any questions about the study, please contact me at Michelle Reichart mltrowbridge@bsu.edu. This study has been reviewed and approved by the Ball State University IRB [1217453-3].

Sincerely,

Michelle Reichart

Principal Investigator:

Michelle Reichart, Doctoral Candidate
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APPENDIX F

Survey Informed Consent

The Impact of College and Career Readiness Partnerships for School Districts Serving Students in Rust Belt Areas

The purpose of this study is to gain an understanding of the extent of partnerships among public high schools, higher education, and local industry in the geographic region known as the "Rust Belt" and to what extent the partnerships serve the betterment of social mobility for students enrolled in College and Career Readiness curricula.

Inclusion/Exclusion Criteria
To be included in this study, participants must serve as a high school level building administrator in the geographical region known as the Rust Belt.

Participation Procedures and Duration
Your participation in this survey will take about 15 minutes. You can skip items or quit at any time. The survey will contain questions about partnerships and partnership barriers between public schools, higher education, and local industry.

Data Confidentiality
Data collected is anonymous and no identifying information such as names, school, district, or community is collected.

Storage of Data and Data Retention Period
Data collected from the survey's will be kept on a password protected computer. The computer will be kept in a secure location. After submission of the final project, all files and data will be deleted after a period of 5 years.

Risks or Discomforts
There are no perceived risks for participating in this study.

Benefits
There are no perceived benefits for participating in this study.

Voluntary Participation
Your participation in this study is completely voluntary and you are free to withdraw your permission at any time for any reason without penalty or prejudice from the investigator. Please feel free to ask any questions of the investigator before signing this form and at any time during the study. Refusal to participate will not affect your standing at your school or district. Your superintendent will not know if you participate or what you say. No identifying information such as names, school, district, or community will be collected therefore will not appear in any publication or presentation of the data.

IRB Contact Information

For one's rights as a research subject, you may contact the following: For questions about your rights as a research subject, please contact the Director, Office of Research Integrity, Ball State University, Muncie, IN 47306, (765) 285-5070 or at orihelp@bsu.edu.

Researcher Contact Information

Principal Investigator:

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Faculty Supervisor:

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By clicking the button below, you acknowledge that your participation in this study is voluntary, you, meet the inclusion criteria for this study and you are aware that you may choose to terminate your participation in the study at any time and for any reason.

APPENDIX G

Survey Questions

The Impact of College and Career Readiness Partnerships for School Districts Serving Students in Rust Belt Areas

Survey Questions

Q1 What is your position?

- ○ Traditional high school level administrator
- ○ Career Center Director

Q2 How long have you served in your current position?

- ○ 0-5 years
- ○ 6 - 10
- ○ 10 + years

Q3 Are you originally from the area in which you work or a community located within the region referred to as the Rust Belt?

- ○ Yes
- ○ No

Q3 What type of locality is your school located in?

- ○ Rural
- ○ Suburban
- ○ Urban

Q5 Which of the following does your school partner with? (check all that apply)

- ☐ Local industry
- ☐ Higher Education
- ☐ Community

Q6 In what ways does your school partner with local industry/ higher education? (Check all that apply)

- ☐ Dual credit courses
- ☐ Internships
- ☐ Apprenticeships
- ☐ Programming decisions
- ☐ Curriculum decisions
- ☐ Financial resources
- ☐ Teaching material resources
- ☐ Courses taught by industry or college employees
- ☐ Student mentoring by industry or college employees
- ☐ Community service activities

Q7 To what extent are the following barriers an issue for your school when partnering?

	Rarely	About half the time	Most of the time
Lack of local industry	○	○	○
State education policy	○	○	○
Transportation	○	○	○
Lack of financial resources	○	○	○
Curriculum doesn't match with local industry need	○	○	○
Scheduling	○	○	○
Access to technology	○	○	○
Parental support	○	○	○
Community support	○	○	○

Q8 To what extent are the following barriers an issue for your students when partnering?

	Rarely	About half the time	Most of the time
Poverty	○	○	○
Lack of financial resources	○	○	○
Transportation	○	○	○
Lack of business skills	○	○	○

	Rarely	About half the time	Most of the time
Lack of industry language			
Lack of academic skills			
Parental influence			
Career programming in competition with local business			

Q9 To what extent are college and career partnerships affected by the following current educational policies?

	Rarely	About half the time	Most of the time
Standardized testing			
Enrollment policies			
CTE teacher credentialing			
Dual Credit/ AP teacher credentialing			
Vouchers			
Criminal history background checks for community/ industry partners			
Curriculum/ programming mandated by state			
Mandated time in class/ school			

Q10 What benefits have been experienced in your community due to partnering? (Check all that apply)

- ☐ Sense of pride in the community
- ☐ Increased employment for recent high school graduates
- ☐ Increased higher education attendance for recent high school graduates
- ☐ Retention of skilled workforce
- ☐ New industry in the community

Q8 What percentage of your students remain in the community upon high school?

- Less than 25%
- Less than 50%
- More than 50%

APPENDIX H

Statistical Charts Grouped by Research Questions

R2: To what extent do barriers prevent students in the Rust Belt from partnering with local industry and higher education?

Table

Student Barrier of Lack of Business Skills

			Lack of business skills			
			Rarely	About half the time	Most of the time	Total
	Rural	Count	73	125	41	239
		% within locality	30.5%	52.3%	17.2%	100.0%
		% within	49.0%	59.0%	61.2%	55.8%
		% of Total	17.1%	29.2%	9.6%	55.8%
	Suburban	Count	60	58	13	131
		% within locality	45.8%	44.3%	9.9%	100.0%
		% within	40.3%	27.4%	19.4%	30.6%
		% of Total	14.0%	13.6%	3.0%	30.6%
	Urban	Count	16	29	13	58
		% within locality	27.6%	50.0%	22.4%	100.0%
		% within	10.7%	13.7%	19.4%	13.6%
		% of Total	3.7%	6.8%	3.0%	13.6%
Total		Count	149	212	67	428
		% within locality	34.8%	49.5%	15.7%	100.0%
		% within	100.0%	100.0%	100.0%	100.0%
		% of Total	34.8%	49.5%	15.7%	100.0%

Table

Student Barrier of Lack of Financial Resources

			Lack of financial resources			
			Rarely	About half the time	Most of the time	Total
	Rural	Count	55	119	64	238
		% within locality	23.1%	50.0%	26.9%	100.0%
		% within	47.4%	58.0%	59.3%	55.5%
		% of Total	12.8%	27.7%	14.9%	55.5%
	Suburban	Count	54	58	22	134
		% within locality	40.3%	43.3%	16.4%	100.0%
		% within	46.6%	28.3%	20.4%	31.2%
		% of Total	12.6%	13.5%	5.1%	31.2%
	Urban	Count	7	28	22	57
		% within locality	12.3%	49.1%	38.6%	100.0%
		% within	6.0%	13.7%	20.4%	13.3%
		% of Total	1.6%	6.5%	5.1%	13.3%
Total		Count	116	205	108	429
		% within locality	27.0%	47.8%	25.2%	100.0%
		% within	100.0%	100.0%	100.0%	100.0%
		% of Total	27.0%	47.8%	25.2%	100.0%

Table

Student Barrier of Poverty

			Poverty			
			Rarely	About half the time	Most of the time	Total
	Rural	Count	68	112	59	239
		% within locality	28.5%	46.9%	24.7%	100.0%
		% within	47.9%	57.7%	62.8%	55.6%
		% of Total	15.8%	26.0%	13.7%	55.6%
	Suburban	Count	65	53	15	133
		% within locality	48.9%	39.8%	11.3%	100.0%
		% within	45.8%	27.3%	16.0%	30.9%
		% of Total	15.1%	12.3%	3.5%	30.9%
	Urban	Count	9	29	20	58
		% within locality	15.5%	50.0%	34.5%	100.0%
		% within	6.3%	14.9%	21.3%	13.5%
		% of Total	2.1%	6.7%	4.7%	13.5%
Total		Count	142	194	94	430
		% within locality	33.0%	45.1%	21.9%	100.0%
		% within	100.0%	100.0%	100.0%	100.0%
		% of Total	33.0%	45.1%	21.9%	100.0%

Table

Student Barrier of Lack of Industry Language

			Lack of industry language			
			Rarely	About half the time	Most of the time	Total
	Rural	Count	76	118	42	236
		% within locality	32.2%	50.0%	17.8%	100.0%
		% within	49.7%	60.2%	55.3%	55.5%
		% of Total	17.9%	27.8%	9.9%	55.5%
	Suburban	Count	65	49	17	131
		% within locality	49.6%	37.4%	13.0%	100.0%
		% within	42.5%	25.0%	22.4%	30.8%
		% of Total	15.3%	11.5%	4.0%	30.8%
	Urban	Count	12	29	17	58
		% within locality	20.7%	50.0%	29.3%	100.0%
		% within	7.8%	14.8%	22.4%	13.6%
		% of Total	2.8%	6.8%	4.0%	13.6%
Total		Count	153	196	76	425
		% within locality	36.0%	46.1%	17.9%	100.0%
		% within	100.0%	100.0%	100.0%	100.0%
		% of Total	36.0%	46.1%	17.9%	100.0%

Table

Student Barrier of Lack of Academic Skills

			Lack of academic skills			
			Rarely	About half the time	Most of the time	Total
	Rural	Count	129	98	11	238
		% within locality	54.2%	41.2%	4.6%	100.0%
		% within	54.2%	60.1%	37.9%	55.3%
		% of Total	30.0%	22.8%	2.6%	55.3%
	Suburban	Count	89	39	6	134
		% within locality	66.4%	29.1%	4.5%	100.0%
		% within	37.4%	23.9%	20.7%	31.2%
		% of Total	20.7%	9.1%	1.4%	31.2%
	Urban	Count	20	26	12	58
		% within locality	34.5%	44.8%	20.7%	100.0%
		% within	8.4%	16.0%	41.4%	13.5%
		% of Total	4.7%	6.0%	2.8%	13.5%
Total		Count	238	163	29	430
		% within locality	55.3%	37.9%	6.7%	100.0%
		% within	100.0%	100.0%	100.0%	100.0%
		% of Total	55.3%	37.9%	6.7%	100.0%

R3: To what extent do barriers prevent schools in the Rust Belt from partnering with local industry and higher education?

Table

School Barrier of State Education Policy

			State education policy			
			Rarely	About half the time	Most of the time	Total
	Rural	Count	100	89	47	236
		% within	42.4%	37.7%	19.9%	100.0%
		% within State education policy	51.3%	58.2%	62.7%	55.8%
	Suburban	Count	68	46	17	131
		% within	51.9%	35.1%	13.0%	100.0%
		% within State education policy	34.9%	30.1%	22.7%	31.0%
	Urban	Count	27	18	11	56
		% within	48.2%	32.1%	19.6%	100.0%
		% within State education policy	13.8%	11.8%	14.7%	13.2%
Total		Count	195	153	75	423
		% within	46.1%	36.2%	17.7%	100.0%
		% within State education policy	100.0%	100.0%	100.0%	100.0%

Table

School Barrier of Transportation

			Transportation			
			Rarely	About half the time	Most of the time	Total
	Rural	Count	68	103	69	240
		Rural	28.3%	42.9%	28.8%	100.0%
		% within	53.1%	55.4%	58.0%	55.4%
	Suburban	Count	47	63	25	135
		Rural	34.8%	46.7%	18.5%	100.0%
		% within	36.7%	33.9%	21.0%	31.2%
	Urban	Count	13	20	25	58
		Rural	22.4%	34.5%	43.1%	100.0%
		% within	10.2%	10.8%	21.0%	13.4%
Total		Count	128	186	119	433
		Rural	29.6%	43.0%	27.5%	100.0%
		% within	100.0%	100.0%	100.0%	100.0%

Table

School Barrier of Curriculum Does Not Match with Local Industry

			Curriculum doesn't match with local industry need			
			Rarely	About half the time	Most of the time	Total
	Rural	Count	102	105	31	238
		% within locality	42.9%	44.1%	13.0%	100.0%
		% within	50.5%	59.0%	64.6%	55.6%
	Suburban	Count	73	49	10	132
		% within locality	55.3%	37.1%	7.6%	100.0%
		% within	36.1%	27.5%	20.8%	30.8%
	Urban	Count	27	24	7	58
		% within locality	46.6%	41.4%	12.1%	100.0%
		% within	13.4%	13.5%	14.6%	13.6%
Total		Count	202	178	48	428
		% within locality	47.2%	41.6%	11.2%	100.0%
		% within	100.0%	100.0%	100.0%	100.0%

Table

School Barrier of Scheduling

			Scheduling			
			Rarely	About half the time	Most of the time	Total
	Rural	Count	68	132	40	240
		% within locality	28.3%	55.0%	16.7%	100.0%
		% within	52.3%	60.6%	48.2%	55.7%
	Suburban	Count	47	56	30	133
		% within locality	35.3%	42.1%	22.6%	100.0%
		% within	36.2%	25.7%	36.1%	30.9%
	Urban	Count	15	30	13	58
		% within locality	25.9%	51.7%	22.4%	100.0%
		% within	11.5%	13.8%	15.7%	13.5%
Total		Count	130	218	83	431
		% within locality	30.2%	50.6%	19.3%	100.0%
		% within	100.0%	100.0%	100.0%	100.0%

Table

School Barrier of Access to Technology

			Access to technology			
			Rarely	About half the time	Most of the time	Total
	Rural	Count	178	52	9	239
		% within locality	74.5%	21.8%	3.8%	100.0%
		% within	54.4%	61.2%	52.9%	55.7%
	Suburban	Count	111	19	3	133
		% within locality	83.5%	14.3%	2.3%	100.0%
		% within	33.9%	22.4%	17.6%	31.0%
	Urban	Count	38	14	5	57
		% within locality	66.7%	24.6%	8.8%	100.0%
		% within	11.6%	16.5%	29.4%	13.3%
Total		Count	327	85	17	429
		% within locality	76.2%	19.8%	4.0%	100.0%
		% within	100.0%	100.0%	100.0%	100.0%

Table

School Barrier of Parental Support

			Parental support			
			Rarely	About half the time	Most of the time	Total
	Rural	Count	161	71	9	241
		% within locality	66.8%	29.5%	3.7%	100.0%
		% within	55.3%	61.7%	33.3%	55.7%
	Suburban	Count	102	27	5	134
		% within locality	76.1%	20.1%	3.7%	100.0%
		% within	35.1%	23.5%	18.5%	30.9%
	Urban	Count	28	17	13	58
		% within locality	48.3%	29.3%	22.4%	100.0%
		% within	9.6%	14.8%	48.1%	13.4%
Total		Count	291	115	27	433
		% within locality	67.2%	26.6%	6.2%	100.0%
		% within	100.0%	100.0%	100.0%	100.0%

Table

School Barrier of Community Support

			Community support			
			Rarely	About half the time	Most of the time	Total
	Rural	Count	173	58	8	239
		% within locality	72.4%	24.3%	3.3%	100.0%
		% within	54.4%	56.3%	80.0%	55.5%
	Suburban	Count	106	28	0	134
		% within locality	79.1%	20.9%	0.0%	100.0%
		% within	33.3%	27.2%	0.0%	31.1%
	Urban	Count	39	17	2	58
		% within locality	67.2%	29.3%	3.4%	100.0%
		% within	12.3%	16.5%	20.0%	13.5%
Total		Count	318	103	10	431
		% within locality	73.8%	23.9%	2.3%	100.0%
		% within	100.0%	100.0%	100.0%	100.0%

Table

School Barrier of Lack of Local Industry

			Lack of local industry			
			Rarely	About half the time	Most of the time	Total
	Rural	Count	60	86	93	239
		% within locality	25.1%	36.0%	38.9%	100.0%
		% within	33.3%	62.3%	82.3%	55.5%
	Suburban	Count	84	35	15	134
		% within locality	62.7%	26.1%	11.2%	100.0%
		% within	46.7%	25.4%	13.3%	31.1%
	Urban	Count	36	17	5	58
		% within locality	62.1%	29.3%	8.6%	100.0%
		% within	20.0%	12.3%	4.4%	13.5%
Total		Count	180	138	113	431
		% within locality	41.8%	32.0%	26.2%	100.0%
		% within	100.0%	100.0%	100.0%	100.0%